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J. Eugene C. Allen ECAllen 6/14/07
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Title: Water Resources Assessment Report Caliente Rail Corridor (without markings)

Supplier Document #: N/A

Supplier Rev.: 0

Supplier Date: 06/27/05

Reference#: NVT-CD-00160

NVM Nevada Transportation Manager Gene Allen
NE Nevada Engineering Kathy Mrotek

Note: Document resubmitted to remove privileged markings only.
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BSC	Transportation Data Pedigree Form *Complete only applicable items.*	QA: N/A Page 1 of 2

Subcontractor:	Item Number/Title/Revision:	Submittal Date:	SRCT No.:
PB/Converse	Water Resources Assessment Report - June 27, 2005	May 15, 2007	07-00130

Section I. Submittal Information (includes above information)

Submittal Description and Revision Summary for Entire Submittal:
This submittal is a re-submittal due to the letter received from BSC dated May 1, 2007 requesting modification (removing "pre-Decision EIS related" markings) to the original submittal.

Special Instructions:

Section II. Data File Information (Add lines below if needed for additional files. Indicate "Last item" or "End of list" after last line used.)

Filename	Rev.	File Size	Description (File description and revision summary for file)	Application and Version/ Add-in or Extension and Version
Water Resources Assessment Report_ Rev. 0_6-27-05.pdf	00	23,010 KB	Combined report in pdf format	Adobe Acrobat 7.0 Professional
WRA Cover&Spine.ppt	00	1,083KB	Report cover and spine	Microsoft PowerPoint Presentation

CB 5-18-07

Section III. Metadata

☐ **GIS Metadata** All GIS data is preferred in ArcGIS9.1 UTM, NAD1983, Zone11, Feet.	Projection: Datum: Zone: Units:
☐ **CAD Metadata** CAD drawings are preferred in **Bentley MicroStation V8 and/or InRoads** and should adhere to established **CAD standards**.	Level descriptions: Scale: Units of Measurement: Horizontal and Vertical Datum:

Section IV. Data Screening (Completed by BSC personnel)

Acceptable for Review?	Screener Name:	Signature:	Date:
☒ Yes* ☐ No	Cathy Stettler	Cathy Stettler	5/24/07

*If "Yes", Data Storage Location: nvtdata\PB\Phase 1\07-00130 Water Resources Assess Rpt Rev 0 06-27-05

Comments: *(Justification for returning submittal is **required**; other comments are optional.)*
Per NV Transportation management, revision 0 is being re-submitted without privileged markings.

CB 5-24-07

~~NV Rail Alignment EIS Related~~ – Deliberative Process – ~~Privileged~~ Not ~~LSN Relevant~~

BSC	**Transportation Data Pedigree Form** *Complete only applicable items.*	QA: N/A Page 2 of 2

Subcontractor:	Item Number/Title/Revision:	Submittal Date:	SRCT No.:
PB/Converse	Water Resources Assessment Report - June 27, 2005	May 15, 2007	07-00130

Section V. STR/STR Support Disposition of Submittal

Process for Review? ☐ Yes ☐ No**	** If "No", date returned:	Comments:	
STR/STR Support Name: E.C. ALLEN		Signature: E C Allen	Date: 7/24/07

KAM 5/24/07

CB 5-24-07 ~~NV Rail Alignment EIS Related – Deliberative Process – Privileged~~ Not ~~LSN Relevant~~

Water Resources Assessment Report

Task 3.4
REV. 0 June 27, 2005

Prepared for:

BECHTEL SAIC COMPANY LLC

Prepared by:

Converse Consultants

Caliente Rail Corridor Hydrologic Analyses

Subcontract NN-HC4-00207

27 June 2005

WATER RESOURCES ASSESSMENT REPORT

CALIENTE RAIL CORRIDOR
YUCCA MOUNTAIN PROJECT, NEVADA

Prepared by:

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Converse Project No. 04-33110-01

June 27, 2005

72/85CS

Water Resources Assessment Report

Caliente Rail Corridor
Yucca Mountain Project, Nevada

Subcontract No. NN-HCA 00207

June 27, 2005

Converse Consultants Project No. 04-33110-01

Table of Contents

List of Tables

List of Figures

List of Plates

Appendix

1.0 Introduction

1.1 Background

Construction of the proposed rail line, referred to in this report as the Caliente Rail Corridor (CRC), would require the use of water during construction activities, which is expected to come largely from groundwater resources. The water used during construction would primarily support construction activities, which include grade compaction, dust control, and concrete production. Potable water will also have to be supplied for workers during the construction process. The general goal of this project is to collect existing information on water resources within the hydrographic basins that may be influenced by the construction along the CRC. This information can be used to during the planning stages of the project and during the development of preliminary strategies that would address the processes that might be involved with obtaining and development of water resources to support construction of the proposed rail line.

The CRC consists of several 1 mile-wide corridors that the Department of Energy (DOE) is currently examining in an Environmental Impact Statement for possible construction of a railroad to Yucca Mountain. The withdrawal of public land within the corridor is also being examined by the Bureau of Land Management (BLM) in an Environmental Assessment (EA).

This report references geographical areas and hydrographic basins, or basins, along the CRC according to the following convention:

1. The CRC consists of two parts; (1) a 1-mile wide corridor (the proposed BLM land withdrawal), which defines the common segment Right-of-Way (ROW), and (2) several identified alternative alignments of the CRC that are included for evaluation.

2. Hydrographic basins (basins) in which any part of the CRC, as defined above, pass through are referenced as CRC Basins. There are 21 basins that meet this geographic criteria.

3. The 40-mile Study Corridor, which is broadly defined as the Study Corridor for purposes of water resources assessment, is a 40-mile wide area along the CRC that was drawn by extending a boundary 20 miles on either side of and perpendicular to the CRC. hydrographic basins that fall within the Study Corridor but outside of the CRC are referred to as Non-CRC Basins. There are 29 basins that meet this geographic criteria.

The information described above is shown graphically in Plate 1-1.

1.2 Purpose and Scope

The objectives of the water resources assessment are the following:

1. Collect, review, and present information regarding the quantity, location, and quality of water resources along with existing water consumption demands within identified basins within the Study Corridor.

2. Support the preparation of an Environmental Impact Statement (EIS) by determining the availability and extent of existing water resources within the Study Corridor.

3. Evaluate alternatives for acquiring water resources along the CRC.

4. Support the preparation of an EIS by performing a preliminary evaluation of water resources and investigation of potential development scenarios associated with construction activities along the CRC.

2.0 Literature and Data Review

Several previous studies have been prepared, which address water resources information in and around the CRC and Study Corridor. In order to support efforts to identify and review literature on existing studies that have occurred within the Study Corridor, Converse developed a digital database of reference material. This electronic database includes references that are generally categorized by the hydrographic basins described in each report. Each reference includes a bibliographic description and, when available, a link to download the report from an online source. In some cases, the references were scanned and archived electronically on a local server where they could be downloaded for viewing purposes.

Data used for this study was obtained from various government and public sources. A summary of pertinent data sources referenced in this report is provided in the following Sections.

2.1 Published References

Most of the initial (historical) water resources-related work within basins along the Study Corridor was performed by the U.S. Geological Survey (USGS) through a series of studies for the Nevada Department of Conservation and Natural Resources (NDCNR) and the State Engineer's office. The first in these series of studies, the results of which were reported in Water Resources Bulletins, was initiated in 1944 under a cooperative arrangement between the USGS and State Engineer then expanded in 1945 by the Nevada Legislature. The next series of studies was initiated by Nevada Legislature in 1960, which resulted in Ground-Water Resources Reconnaissance Series. Both studies resulted from the need for appraisals of the State's water resources in response to increased interest and demand for development of these resources throughout Nevada.

Since the initial series of studies performed by the USGS, additional studies within basins along the Study Corridor have been published, which provided confirmation, and in some cases additional information, beyond the Water

Resources Bulletins and Reconnaissance Series described above. These additional studies were generally performed by the USGS, Desert Research Institute (DRI), Las Vegas Valley Water District (LVVWD), Nevada Division of Water Resources (NDWR), and private consulting firms. In most cases water resources studies along the Study Corridor were performed for an agency of the Federal Government or the State of Nevada.

2.2 GIS Data

This project incorporated the use of Geographical Information System (GIS) data to display and review water resources data within the Study Corridor. All GIS data used for this project is organized and stored digitally in a database structure. A summary of the GIS project data used for this project includes the following:

1. **CRC, 1-Mile ROW and Alternate Rail Alignments:** Provided by Bechtel SAIC Company, LLC (BSC).

2. **Political Map Data:** Locations for roads and legal boundaries for cities, towns, county, and the states were provided by BSC. BSC also provided boundary information for the Nevada Test and Training Range (NTTR) and the Nevada Test Site (NTS).

3. **Hydrographic Basin Boundaries for Nevada:** Compiled by Rush (1974), USGS-WRD (Water Resources Division), for the State Engineer. This layer of information is a polygon coverage of the State Engineer's hydrographic basins (basins) for the state of Nevada. The areas were originally delineated in 1968 in collaboration with the USGS (Rush, 1968a). The 1974 map, *Static Ground Water Levels of Nevada*, has become the defacto reference for the hydrographic basins and was used for this project.

4. **Nevada Geology:** Provided by BSC, based on generalized aeromagnetic geology maps from the USGS as digitized from Turner and Bawiec (1991).

5. **Nevada Aquifers:** Delineated aquifer boundaries digitized based on Planert and Williams (1995), Hydrologic Atlas 730-B (California and Nevada).

6. **Elevation Dataset:** This data is based on USGS National Elevation Dataset (NED), which was developed by merging digital elevation data with high-resolution images in raster format. The shaded relief display is derived from NED using a hill-shade technique.

7. **Topographic Information:** Digitized USGS 7.5 minute quadrangle maps.

8. **Well Data:** Information on wells was obtained from NDWR Well Log Database and USGS National Water Information System (NWIS). This data is explained in more detail in the following Sections.

9. **Surface Water Data:** Information on gauged springs and streams was obtained from the USGS-NWIS. This data is explained in more detail in the following Sections.

10. **Nevada Water Rights Data:** Information on Nevada water rights permits, or appropriations, within the 50 Study Corridor Basins was obtained from the State Engineer's Office in Carson City. This data is explained in more detail in the following Sections.

2.3 Descriptions of Spatial Data

A database of water resources information was developed for this project, and is referenced in the report as the GIS Project Database. This information was incorporated in a GIS base map for review and display purposes. As described in the following Sections, well and surface water (springs and streams) data were obtained from NDWR and the USGS. Information on water rights were also obtained from State Engineer's office and incorporated into the GIS Project Database described in the preceding Section.

2.3.1 NDWR Well Data

The NDWR well data was obtained in the form of a digital database known as the "Well Log Database," which is available in the public domain from NDWR. This database includes basic information (not including lithology) filed by licensed well drillers when a well is drilled anywhere in Nevada. Well log information includes, but is not limited to, a general and legal description of the well and location, borehole lithology (Well Log Database), well completion information, and well testing data (if available).

NDWR has added to the Well Log Database approximate coordinates for the well locations. Based on information provided by NDWR, the accuracy of well coordinates included in the Well Log Database can vary, in terms of latitude and longitude within the following ranges:

- 1-minute: approximately 6,060 feet
- 10-seconds: approximately 1,010 feet
- 5-seconds: approximately 505 feet
- GPS Data: "accuracy not yet defined"

Note that these ranges of reported coordinate accuracy are based on the legal description (Township, Range, and Section). The State does not require surveyed locations for wells that are filed with NDWR. As a result, many of the well logs have been filed at NDWR with incorrect legal descriptions that, in some cases, cause the well coordinates to be off by as much as several thousand feet within a specific hydrographic basin. In some cases, the well logs include a legal, or location description that places them in the wrong basin altogether. For most of the wells within the 40-mile Study Corridor, the reported coordinates were generally based on the center of the Quarter-Quarter, or 40-acre Quarter, Section descriptions provided on the well log file for each well. Therefore, the well could actually be located anywhere within the described 40-acre Quarter of land. Table 2-1 includes a quantitative summary of the NDWR wells spatially referenced for this project and included in the GIS Project Database. It should also be noted that entries into the NDWR Well Log Database represent an event that has occurred at a sell site, which can include the re-drilling or abandonment of an existing well. Therefore, all NDWR Well

Log information should not be treated as representative of well conditions at the time of first construction.

A total of 2,068 wells were listed in the Well Log Database having coordinates within the 40-mile Study Corridor. These wells were broadly placed into two groups; 1) wells that do or could have water rights or 2) wells that generally are not permitted, such as wells with a designation of Unused, Test Well and Monitoring (see Plates 4-1 thru 4-15). All wells with a designation of Domestic (unless a water rights application number was provided on the domestic well log) were removed from the GIS Project Database. Note that in Nevada (NRS 534.180), a water right application and permit are not required to drill a well for domestic purposes, but in some cases they are provided. Wells were also not included in the Project Database if the designated "Work Type" on the log specified that the well was Plugged or Abandoned. Table 2-1 includes a summary accounting for the number of wells and types included for this project. Locations of NDWR well points are shown graphically in Plates 4-1 thru 4-15 for each of the CRC basins. Additional information regarding NDWR wells located within the 1-mile of the CRC is included in Appendix E (based on NDWR Well Log Database).

Table 2-1: NDWR Wells Summary

Number of Wells	Criteria Description
2,068	Total number of NDWR wells with coordinate descriptions within the 40-mile Study Corridor
737	Number of NDWR wells removed from the project database with "Proposed Use" designations of Domestic (without water right permit application number). Also removed, were 19 of 36 well log entries having "Work Type" designations of Plugged or Abandonment (the other 17 of these 36 entries were included because they listed water right application numbers)
1.331	Number of NDWR wells included in the project database of which, 648 well logs had no water rights application number listed and 310 well logs included water rights application numbers that were matched to water rights data.
268	Total number of NDWR wells that were spatially moved within the GIS Project Database. This value represents the number of well logs (out of 310 with application numbers) having water rights application numbers that matched the designated application number filed on water rights permit (see following Section). The location described in the actual water right permit data was considered more accurate and therefore used to spatially relocate NDWR wells.

2.3.2 Water Rights Data

Water rights abstract information was obtained from a public database that is maintained by the State Engineer's office at NDWR in Carson City, Nevada. Water rights data included a summary of the information specified in each permit as filed with the State Engineer's office. An overview of the water rights data and how it was used within the context of this project is explained below. Section 4.2 of this report includes a detailed description of the information obtained from the State Engineer's office pertaining to water rights data.

The legal description on the water rights data was used to relate the permit to its corresponding 40-acre Quarter legal Section within the GIS Project Database (described in the preceding Section). It should be noted that the Quarter-Quarter locations for each point of diversion provided in the water rights permit abstracts are considered accurate to within the 40-acre Quarter Section. In general, locations assigned to water right permits are considered to be accurate to the described level because each application must be accompanied by a legal survey, which includes a correctly documented legal description provided by a certified State Water Right Surveyor. The water right applications and rulings are updated by the State Engineer's on a periodic basis and may have up to an 8 to 12 month lag (verbal communication, NDWR). The water right summaries obtained for this project were based upon information on file as of December 2004. A more detailed discussion on specific numbers and types of water rights in various basins that were referenced in this project is included in Section 4.2 of this report. Locations of legal Sections containing underground and surface water rights within the 40-mile Study Corridor are shown graphically in Plates 4-16 thru 4-18. A summary of water rights abstract information for each of the Study Corridor basins is included in Appendix C.

2.4 USGS-NWIS Data

The USGS investigates the occurrence, quantity, quality, distribution, and movement of surface and underground waters and disseminates the data to the public; tribal, state, and local governments; public and private utilities; and other Federal agencies involved with managing Nevada's water resources.

The USGS-NWIS is a large collection of data and information on the water resources of the United States. This data is shared with the public through the World Wide Web via NWISWeb. Within this Web site, data are displayed as graphs, in tables, or on maps. Complete data files can also be downloaded. The database contains current and historical water data from more than 1.5 million sites across the nation.

In 1889, the USGS established its first gauging station in Nevada for providing to the public data about Nevada's water resources. Currently, this database provides access to water resources data collected at approximately 20,000 sites in Nevada. Online access to this data is organized around the categories listed below in Table 2-2.

Table 2-2: USGS-NWIS Data Description

Data Type	Description
Site Information	Descriptive site information for all sites with links to all available water date for individual site. Site information generally includes (but is not limited to) coordinate location, elevation, date ranges for associated data, hydrographic units, aquifer codes, date of completion and well depth.
Real-Time	Current conditions data transmitted from selected surface water, groundwater and water quality sites.
Surface Water	Water flow and levels in streams, lakes, and springs.
Groundwater	Water levels in wells.
Water Quality	Chemical and physical data for streams, lakes, springs, and wells.

The GIS Project Database developed for this project includes spatial data and summary information included with each USGS site. Active hyperlinks were provided for each site (within the Project Database) so that all available site information and time series data (when available) can be retrieved from the NWIS online database. A quantitative summary of the USGS sites is included in Table 2-3 below and graphical locations of USGS sites within the CRC basins are included in Plates 4-1 thru 4-15. Appendix A includes a summary (with Universal Resource Locations (URL)) to USGS data obtained for this project. It should be noted that a USGS site constitutes a location where at least one discrete measurement was made and documented in the NWIS database. Some sites have dedicated gages or monitoring instruments that provide data logging capabilities over specific periods.

Table 2-3: USGS-NWIS Site Summary

Sites Within 40-mile Study Corridor (All 50 Basins)	Sites In 21 CRC Basins (Within 40-mile Study Corridor)
Total = 991 Wells = 827 Springs = 82 Streams = 46 Unknown = 36	Total = 681 Wells = 566 Springs = 68 Streams = 37 Unknown = 10
USGS-NWIS sites reporting Water Quality in CRC Basins (Within 40-mile Study Corridor)	
Total = 154 Wells = 64 Surface (springs and streams) = 90	

The USGS has documented the coordinate and elevation accuracy for sites included in the NWIS database. Reported spatial accuracy of the USGS data varies based on the information included in Table in 2-4 below. The site information for the USGS wells, springs and streams in the GIS Project Database and Appendix A (USGS Data) includes coordinate accuracy (and the codes shown in Table 2-4) as well as elevation accuracy descriptions for each site. In addition, data tables in Appendix E provide summary information on USGS wells and NDWR wells located within 1 mile of the CRC.

Table 2-4: USGS-NWIS Spatial Accuracy

Code	Description
H	Accurate to +/- 0.01 second (differentially corrected GPS)
1	Accurate to +/- .1 second (differentially corrected GPS)
5	Accurate to +/- .5 second (Precise Positioning Service (PLGR/PPS GPS))
S	Accurate to +/- 1 second
R	Accurate to +/- 3 seconds (Standard Positioning Service (SPS GPS))
F	Accurate to +/- 5 seconds
T	Accurate to +/- 10 seconds
M	Accurate to +/- 1 minute
U	Unknown

3.0 Water Resources Framework

3.1 Regulatory Framework

In the state of Nevada all sources of water within the boundaries of the State whether above or below ground belong to the public as defined by NRS 533.025. Individuals or entities within the State can apply for the right to use that water. Nevada Water Law is founded on the doctrine of prior appropriation – "first in time, first in right" (Shamberger, 1991). Nevada Water Law is set forth in Nevada Revised Statutes (NRS), Chapters 533 and 534. There are also numerous court decisions that have helped define Nevada Water Law through the years as well. The NDWR is responsible for the appropriation, adjudication, distribution, and management of water in the State. The appointed administrative head of this division is the State Engineer who serves as the water rights administrator of the State. To carry out these duties the State Engineer is vested with broad discretionary powers (NDWR, 1992)

All water rights are considered real property and thus are conveyed by deed. Water rights can be bought and sold, and the location and type of use changed.

There are generally three main components of appropriative water rights in Nevada, which consist of the following:

1. Beneficial use, which is the measure and limit of the right to the actual water used.

2. Rights are stated in terms of definite quantity, manner of use, and period of use.

3. A water right can be lost by abandonment or forfeiture.

3.1.1 Appropriation of Public Waters

Subject to availability of unappropriated water, existing rights, and the public interest, water may be appropriated for any beneficial use. Where there is unappropriated water in the source, and where the proposed use or change does not tend to impair the value of existing rights, or to be otherwise detrimental to the public interest, the State Engineer is required by statute to approve the application (NDWR, 2000). However, because the basis of the water law in Nevada is the prior appropriation doctrine, all rights are issued subject to prior rights on the source. The date of priority is the date the original application was received by the State Engineer at the NDWR office in Carson City. All permits bearing an earlier date are "senior" and all permits bearing a later date are "junior" (NDWR, 2000).

The general policy of the State Engineer is to limit groundwater withdrawals from a basin to the average annual recharge, or perennial yield, to the groundwater basin (also referred to as hydrographic basin). By definition, the perennial yield of a groundwater basin is the maximum amount of natural discharge that can be salvaged each year over the long term by pumping without bringing about some undesired result, such as static water level decline beyond a reasonable limit.

A permit to appropriate water grants the right to develop a certain amount of water from a particular source for a certain purpose and to be used at a definite location. This right can become a perfected appropriation only upon: (1) completion of the works of diversion; (2) the placing of the water to beneficial use; and (3) filing the proofs required. A right may be lost to the holder of the permit if he fails to meet the statutory requirements (NDWR, 2000 and NRS 533).

3.1.2 Application Process

In order to acquire a water permit, an application must be made in accordance with requirements described in NRS 533.325. Accordingly, no application shall be for the water of more than one source to be used for more than one purpose (NRS 533.330). Once an applicant submits the appropriate documentation describing the desired new water right according to statutory requirements, a notice must be sent to a newspaper of general circulation in the area where the application was filed. This notice is published for approximately 30 days (NRS 533.360). Interested parties may file a formal protest up until 30 days after the last day of publication explaining their objections to the application and requesting denial of the application or other appropriate action by the State Engineer (NRS 533.365).

After expiration of the protest period, the application is deemed "ready for action" by the State Engineer. By definition, "ready for action" implies that the period of waiting has passed for public recording and the application is ready for review by the State Engineer with the ultimate outcome of denial, modification or permitted as applied. When considering an application for approval or denial, the State Engineer must consider the following:

1. Is there unappropriated water at the source?

2. Will the specified use of the water under the proposed application conflict with existing rights?

3. Will the use of the water under the proposed application prove detrimental to the public interest?

4. Will the use of the water under the proposed application adversely impact domestic wells?

In addition to these items, other criteria within the NRS 533.370 deal with impacts within irrigation districts, the good faith intent of the applicant to construct the works of diversion and put the water to beneficial use. Furthermore, the State Engineer may require any additional information needed prior to approval or rejection of an application (NRS 533.375) in order to assist in determining the appropriate action on the application. The application process described above generally applies to applications for temporary appropriations as well.

3.1.2.1 Required Proofs

The application can either be approved as requested, reduced in rate of flow and volume and then approved or denied. If approved the application will become a permit, and it will be imposed with terms and conditions of performance. A "Proof of Completion" affidavit must be filed on or before the stipulated due date. The proof of completion is a description of the improvements, which enable the permittee to divert water to the proposed place and proposed use, e.g., the construction and equipping of a groundwater well.

The "Proof of Beneficial Use" is the final proof required by the terms of the permit. The time requirements for filing this proof depend on the amount and type of work contemplated by the permit holder when the application was filed. The time may also be subject to what the State Engineer determines is a reasonable time to accomplish beneficial use. The State Engineer may also grant time extensions. In general, good faith and reasonable diligence are the statutory criteria guiding the State Engineer (NRS 533.395) in considering extensions of time.

A permit holder may place less water (on less land, for example, if for irrigation purposes) than granted on the permit. However, when this occurs, the water right is then limited to that which was actually put to beneficial use. If the permittee has filed a "Proof of Beneficial Use" and then wants to expand to the originally permitted acreage (in the case of permits for irrigation water), or use the water for it at a later date, the permittee must obtain another permit.

Once the proofs have all been filed and the other terms of the permit complied with, the State Engineer prepares a "Certificate of Appropriation" describing the use to be made of the water as shown on the "Proof of Beneficial Use." At this point the permit is designated as a certificated permit, which is subject to those terms and conditions on that specific permit. These terms and condition consist of general provisions stating that the permit is subject to all prior rights on the source, measuring device requirements and any special limitations or conditions that the State Engineer may impose. Diversion rates and annual duty of water that may be used are also set forth in the permit terms. Note that a certificated water right may be lost by forfeiture and/or abandonment. In addition, the State Engineer may grant an extension of time to work a forfeiture, provided a proper request to do so is submitted prior to the five (5) successive years of no use subject to conditions and limitations provided by NRS 534.090.

3.1.2.2 Diversion Rate and Annual Use

The amount of allowable diversion in cubic feet per second (cfs) is set out in the permit terms. This amount depends on what the applicant requests and what the State Engineer finds is reasonably necessary for the use sought in the application. Generally, the applicant is allowed the diversion needed to provide a sufficient head of water for distribution, but is limited to a seasonal or annual duty of water. The amount of water the permit holder will be allowed to divert annually, or the duty, is the limitation noted. The State Engineer determines this duty from data and information showing the actual amounts needed in the same geographical area for existing permitted used of the same type. Or, if the permit is for water to be used on land subject to a court decree, the duty allowed by the court may be used (NDWR, 2000).

When the water appropriated from a source is going to be used to supplement water already supplied from other sources, the duty allowed will be limited to the amount necessary to reasonably fulfill the purpose of the use from all sources. For example, an owner has a parcel of land having an annual duty of four (4) acre-feet from each of two (2) or more sources for that parcel, will still be limited to a combined total duty of four (4) acre-feet from any and all sources.

3.1.2.3 Assigning and Conveyance of Water Rights

All water rights in Nevada are issued subject to prior rights on the source. Once a permit is granted, the water must be used on the land and for the purpose described in the permit. A water right can be severed from the land only with the consent of the owner of record as reflected in the permit record in the NDWR office.

It is possible to buy or sell water rights and change the water's point of diversion, manner of use and place of use by filing the appropriate application with the State Engineer. Water rights in Nevada have the standing of both real and personal property, meaning they are conveyed as an appurtenance to real property unless they are specifically excluded in the deed of conveyance. When water rights are purchased or sold as personal property or treated as a separate appurtenance in a real-estate transaction, the water rights are conveyed specifically by a deed. Every water right conveyance document must be filed in the Office of the County Recorder in each county where the water is applied to beneficial use or diverted from its source. Upon transfer of a water right a "Report of Conveyance" must be filed with the State Engineer. The State Engineer shall confirm the Report of Conveyance upon the proper filing of the report, the payment of the prescribed fees, provided no conflict exists in the chain of title, and the State Engineer is able to determine the rate of diversion and the amount of acre-feet or million gallons from the conveyance document. The water right number should be listed in each document.

3.1.3 Designated Underground Basins

In certain hydrographic basins where the State Engineer has determined that groundwater is being depleted, that basin may be declared as a "Designated basin" as provided by NRS 534.120. This designation provides the State Engineer far-reaching administrative capacity to impose additional conditions and restrictions on water use originating from that basin. A Designated basin is not "closed" to additional appropriations; however, preferred uses are imposed. Preferred use generally includes water for domestic, municipal, quasi-municipal, industrial, mining and stock-watering uses, and any uses for which a county, city, town, public water district or public water company furnishes the water. It should be noted that temporary permits may be issued in Designated basins, but can be limited in time of use and may be revoked if and when water can be furnished by an entity such as a water district or municipality presently engaged in the area.

Prior to drilling a well in a Designated basin, a permit to appropriate water is required as provided in Subsection 1 of NRS 534.050. However, upon written application and a showing of *good cause,* the State Engineer may issue a waiver of the requirement of Subsection 1 (NRS 534.050): *1) For exploratory wells to be drilled to determine the availability of water or the quality of available water; 2) To allow temporary use of the water in constructing a highway...*Subsection 3 (NRS 534.050) also specifies that in other basins or portions of basins which have not been designated by the State Engineer no application or permit to appropriate water is necessary until after the well is constructed and water developed, but a permit must be obtained prior to diversion of water from the constructed well, pursuant to the provisions of NRS 533. However, Subsection 4 (NRS 534.050) provides the State Engineer the authority to issue a written waiver of the requirements of Subsection 3 (NRS 534.050), to allow *temporary use of water in constructing a highway...*

3.1.4 Application to Change

The point of diversion and place and manner of use of an existing right or portion thereof (permitted, certified, vested) may be changed subject to statutory criteria and approval by the State Engineer (NRS 533.345). Permanent applications to change follow the same review process as an original application. The statutory criteria for approval is contingent upon the proposed change not impairing existing rights or be detrimental to the public interest. Changes in the manner of use are common; however, certain changes may be restricted due to their preferred status. For example, agricultural rights are frequently changed to municipal, commercial, industrial, and recreational uses. As described in the previous Section, preferred uses can be declared by the State Engineer and proposals to changes in the manner of use from a preferred use to a non-preferred use may not be approved (NRS 534.120). For example, municipal rights, mining, and milling rights may not be changed to irrigation. In addition, when two or more water rights cover the same place of use, an application to change must be filed to change all water rights. For example, if two irrigation water rights are approved to irrigate the same acreage, one right cannot be removed without removing the second right.

In some cases changes to permits are necessary and allowed while the right is still being perfected. In 1993, the Nevada legislature expressly provided that before water has been applied to its intended use under a permit, the *...place of diversion, manner of use or place of use...* may be changed (White and Jankowski, 1999)

3.1.4.1 Temporary Changes and Transfers

The State Engineer may approve an application for a temporary change of point of diversion, manner of use, or place of use of water already appropriated without publication of a notice of the application, provided that the prescribed fees are paid and the temporary change is in the public interest and does not impair water rights held by other persons. A "temporary change" permit can be granted for any period not to exceed one year. NRS 533.345 further states that, *If the State Engineer determines that the temporary change may not be in the public interest, or may impair the water rights held by other persons, he shall give notice of the application as provided in NRS 533.360 and hold a hearing and render a decision as provided in this chapter.* However, even though public notice is not required for temporary permit changes, in accordance with NRS 533.363 the State Engineer is required to notify the county commission for applications to use water in the county other than that in which it is appropriated or currently diverted or used.

As provided by NAC 534.446 a waiver to use water for *construction of highway* can be issued by the State Engineer to allow the *temporary use of water from an existing well for the construction of a highway, or to drill a well and use the water from the well for the construction of a highway.*

3.1.5 Interbasin Transfers

Due to the state's arid climate and limited water resources, transferring water from one basin to another has been occurring in Nevada since 1873. Under NRS 533.370 the *Interbasin transfer of groundwater means a transfer of ground water from which the proposed point of diversion is in a different basin than the proposed place of beneficial use.* In determining whether an application for an Interbasin transfer of water should be approved or rejected, under NRS 533.370 the State Engineer must consider:

1. Whether the applicant has justified the need to import the water from another basin

2. Whether a conservation plan has been adopted and is being effectively carried out. If the State Engineer determines that such a plan is advisable for the basin into which water is to be imported.

3. Whether the proposed action is environmentally sound as it relates to the basin from which the water is exported.

4. Whether the proposed action is an appropriate long-term use that will not unduly limit the future growth and development in the basin from which the water is exported.

5. Any other factor(s) the State Engineer determines to be relevant.

The applicant may also work with the county from which the water is proposed to be transferred to develop a plan to mitigate adverse economic impacts of the transfer. If a plan cannot be agreed to, the county (with the approval of the State Engineer) has the option to impose an annual fee on the water transferred (NDWR 2004a). The amount of the fee is defined in NRS 533.438.

3.2 Hydrogeologic Framework

3.2.1 Physiographic Setting

For hydrologic analysis and water planning and management purposes, the USGS and NDWR through various studies have divided the State of Nevada into fourteen (14) distinct and discrete hydrologic units called Hydrographic Regions (Rush, 1968a). A hydrographic region, or watershed, is broadly defined as a geographic area drained by a single major stream or an area consisting of a drainage system comprised of streams and often natural or man-made lakes. These principal hydrographic regions have been further disaggregated into 256 smaller areas, which the USGS commonly refers to as Hydrographic Areas and Sub-Areas. The NDWR has customarily referred to these sub-areas as Hydrographic Basins, or simply Basins (as used in this report). These smaller divisions into basins typically comprise a valley, a portion of a valley, or a terminal basin.

The CRC crosses four (4) Hydrographic Regions, which include Central (Region 10), Escalante Desert (Region 12), Colorado River Basin (Region 13), and Death Valley Basin (Region 14). The CRC passes through three (3) counties in Nevada — Lincoln, Nye, and Esmeralda. The 40-mile Study Corridor also passes through parts of White Pine and Clark. Nevada's 14 Hydrographic Regions and county boundaries are shown in Figure 3-1.

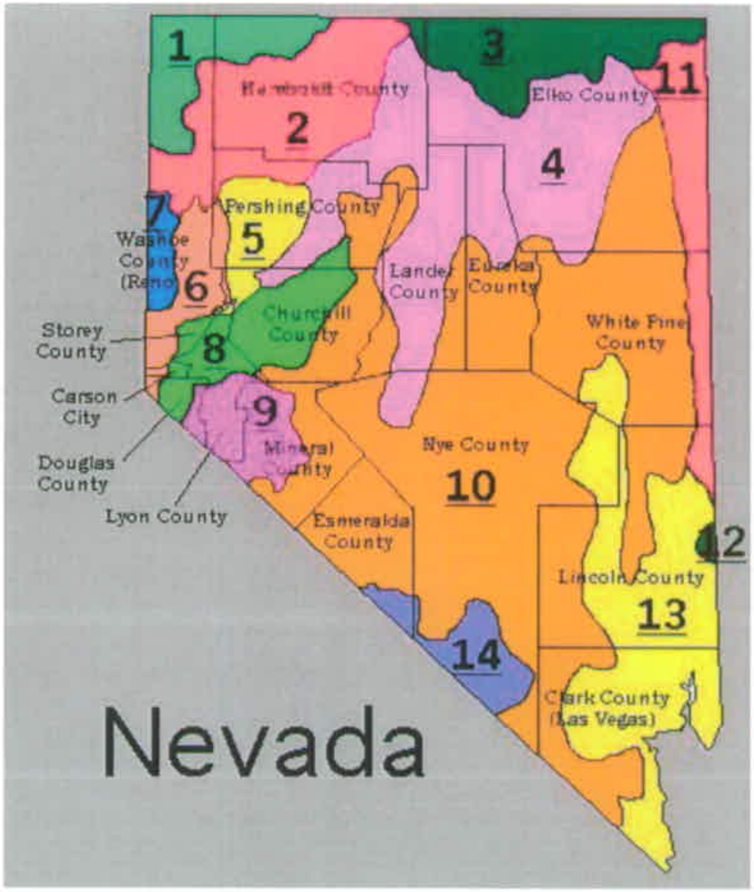

Figure 3-1 Map of Nevada's Hydrographic Regions

The CRC is situated within the Nevada portion of the Basin and Range Physiographic Province or topographic region (Fenneman, 1931). The Province is characterized by alternating structural basins forming long valleys that are separated by uplifted mountain ranges. Unconsolidated alluvial sediments fill in the basins and with consolidated rock cropping out in the mountains and underlying the alluvial deposits in the basins. This arid to semiarid region has low precipitation and high evaporation. Aquifers exist in the alluvial deposits filling the basins and are recharged through rainfall and snowmelt in the surrounding mountain ranges and flows towards the axes of the valleys through the alluvium.

3.2.2 Groundwater Occurrence

Most groundwater recharge in the hydrographic basins along the Study Corridor is derived from winter and spring precipitation. The moisture is typically stored in snow pack, at elevations of 7,000 feet and higher. A limited portion of the precipitation not lost through evapotranspiration reaches the groundwater reservoirs in the valley either by way of streams, which eventually discharge onto alluvial aprons or by infiltrating directly into fractured consolidated rock in the mountains and percolating vertically and laterally to the valley-fill aquifer. Additional inflow is received from localized intense storms and groundwater recharge through unconsolidated alluvium in the valleys. Natural discharge of groundwater occurs in most basins as a result of spring and seeps, phreatophytes, and interbasin flow. In the latter case, individual basins may be hydraulically linked into regional flow systems, while other basins may be hydraulically isolated.

Groundwater recharge, storage, and flow also depend on geologic conditions. Within the Study Corridor, groundwater occurs both in alluvium and bedrock aquifers in each of the 50 hydrographic basins. In the alluvium, groundwater recharge, flow, storage, and discharge are controlled by the permeability of the unconsolidated sediments. In the bedrock, porosity, permeability, and structure (i.e., faults and fractures) control the recharge, flow, storage, and discharge of the groundwater. In general, bedrock lithology (rock type) and structure is typically complex in the area making groundwater occurrence more difficult to understand and predict than in the alluvium.
Along the Study Corridor, groundwater typically occurs in one or more of the following regional hydrogeologic units (Waddell, et al., 1984):

1. Valley-fill deposits or alluvium
2. Volcanic rocks
3. Clastic sedimentary rocks
4. Carbonate rocks
5. Intrusive and metamorphic rocks

Only the valley-fill deposits and carbonate rock units form major aquifers, with the potential for well yields that can vary from less than 100 to more than 2,000 gpm. The other hydrogeologic units typically yield less than 10 gpm per well. Although numerous springs are found in association with other rock layers, development of these aquifers is relatively difficult. It is also important to note that well yields for all units can increase significantly where highly fractured bedrock zones exist. The first hydrogeologic unit listed above (alluvium) is the principal unit of interest relative to the Study Corridor, since it can be found within all of the subject basins and is generally more accessible compared to carbonate and volcanic aquifers. Therefore, the most important water-bearing stratum in the Study Corridor is valley-fill alluvium and to a lesser extent and locally, the carbonate aquifer (where present at accessible depths).

3.2.3 Valley-Fill Alluvial Aquifers

The basins within the Study Corridor are typically a fault-bounded basin with adjoining mountain ranges common to the basin and Range Province. These basins are filled with detritus derived from the ranges. The unconsolidated sediment consists of silt, sand, gravel, cobbles, and boulders that are generally deposited within alluvial fans, intermittent streams, and ephemeral lakes. Coarse-grained alluvial fan deposits are typically located near the base of the mountains and grade into and interfinger with fine-grained sand, silt, and clay deposits in the central portion of the valleys. These deposits increase in thickness from the mountain fronts to the center of each valley, where they can be a thick as 5,000 feet or greater. The surficial deposits along the mountain fronts are generally referred to as alluvium even though they typically include the thin veneer of locally derived colluvium and alluvial and eolian (windblown) sediments in the gullies and major canyons extending up the mountain slopes. The thicker fine-grained alluvial sediments in the valley bottoms are also called playa (dry-lake) deposits. Playas are dry lake beds typically found at the bottom of undrained desert basins that are sometimes covered with water during wet periods. Over time, due to these periods of water accumulation followed by periods of evaporation, playa areas tend to accumulate fine-grained sediments and soluble salt deposits, which can impact shallow groundwater (when present).

As stated previously, groundwater in the unconsolidated sediments generally flows from the recharge areas in the surrounding mountains to the axial center of the basins. The direction of groundwater flow in the near-surface unconfined aquifer generally follows the local topography. Eventually, the unconfined aquifers transition into deeper confined valley-fill aquifers especially where the alluvial fan deposits interfinger with the playa deposits. The low permeability interbeds of playa silts and clays serve as confining layers. A usually temporal and near-surface unconfined aquifer may also be present in the playa area itself which is recharged by lake-forming storm runoff events or occasionally discharges from nearby seeps and springs. Overall flow in the alluvial aquifers is usually restricted to individual hydrographic basins. Interbasin flow in the alluvial aquifers is generally limited (Winograd and Thordarson, 1975).

The areal extent, depth to, and thickness of the valley-fill aquifer is highly variable within the Study Corridor. This variability is found between basins and within each basin itself. Although the alluvium fills basins to significant thicknesses in the central portions of the valleys in many cases, the hydraulic properties of the coarse-grained alluvial fan aprons and deposits surrounding the fine-grained playas are of greater interest in siting wells. As a result, the depth to water combined with the thickness of saturated coarse-grained alluvium is the best criteria for siting production wells in the valley-fill deposits. The ideal well locations are generally located outside the margins of the playa where the alluvial fans begin to interface with the fine-grained deposits particularly in areas situated downgradient from the higher mountain ranges where recharge is the greatest. In some basins, the first wells drilled in these sites will have artesian flow.

3.2.4 Carbonate-Rock Aquifers

The carbonate-rock aquifer consists of thick sequences of saturated or partially saturated Paleozoic limestones and dolomites (Burbey, 1997). For the most part, the carbonate-rock aquifer underlies the basin-fill aquifers. Flow through the carbonate-rock aquifer generally occurs through fractures and solution features (caves), and is likely to be concentrated in areas of greater fracture frequency or solutioning that parallels hydraulic gradients. In contrast to the valley-fill aquifers, flow in the carbonate-rock aquifer is not basin restricted and this generally occurs on a regional basis.

Recharge to the carbonate-rock aquifer, as with the valley-fill aquifer, is mainly through rainfall and snowmelt in the mountains. However, unlike the basin-fill aquifers, recharge to the carbonate-rock aquifer occurs on a regional basis with some regions contributing significantly more than others. It is therefore quite common for recharge from precipitation to have fallen 100 miles or more from the point of discharge or use (Burbey, 1997).

The carbonate-rock aquifer along the Study Corridor is prevalent toward the eastern portion of the alignment. Carbonate rocks are also present near a small portion of the western CRC near Yucca Mountain. Near the eastern portion of the CRC importance of the carbonate-rock aquifer is two-fold – first as an alternate groundwater source to valley-fill aquifers; and secondly, in mountain areas underlain by permeable carbonate rocks, most of the recharge may enter the carbonate rocks and little water remains to supply runoff and feed the local valley-fill reservoirs. Therefore, in the latter case, the carbonate aquifer may be the only possibility for siting wells. However, the success of carbonate wells is hindered by the usually greater completion depths that may be required combined with the "hit or miss" results of penetrating the fracturing that can produce significant quantities of water given the right geologic conditions. Drilling may also be difficult when penetrating the carbonate aquifer due to the potential to lose circulation within the borehole.

3.2.5 Fault Zones

The Basin and Range Province by its very nature has numerous faults cutting both the mountain blocks and intervening basin fill of the region. Faults can act as either barriers or conduits to groundwater flow (Winograd and Thordarson, 1975). The faulting influence on groundwater flow is dependent on the physical and lithological characteristics of the rock or materials. Faulting of softer, less competent rocks can form crushed and pulverized rock (fault gorge), which would act as a barrier to groundwater flow. Mineralization along faults also can reduce or prevent the transmission of water. Barriers may also result from the fault juxtaposition of more permeable materials with less permeable ones along groundwater flow paths. Faulting of harder, more competent rock can create conduits that allow higher groundwater flow and storage than surrounding unfaulted rock. Fault zones are also the most common hydraulic links for regional flow systems between individual basins. Successful groundwater exploration programs should consider and incorporate, if relevant, the presence or relationship to faults along with the hydrogeologic units described previously.

3.2.6 Water Quality

The quality of groundwater varies throughout the Study Corridor. In general, groundwater in areas of recharge has low chemical concentrations, but as it moves through the groundwater system to discharge areas (i.e., valley bottoms), it dissolves sediments and rock materials. The extent to which chemical constituents are dissolved is largely determined by factors that include: (1) the solubility, volume, and distribution of the materials; (2) the length of time that the water is in contact with the materials; (3) the distance that the water travels from the point of recharge; and (4) the temperature and pressure within the groundwater system.

In general, the water quality degrades dramatically in alluvial-fill aquifers in close proximity to the playa lakes along the central axis of the valleys (Winograd and Thordarson, 1975). In cases where there is downward leakage of the near-surface aquifers in the playa itself to deeper basin-fill aquifers, the water quality is strongly saline. The water quality of the carbonate-rock aquifer is not only generally uniform and consistent as compared to the valley-fill aquifer but more commonly potable.

Water quality can vary from basin to basin and is not only impacted by hydrogeologic conditions described above, but also man-made surface conditions such as development, irrigation, and agricultural activities. In general, most of the basins within Study Corridor have limited water quality information available. However, a general discussion of specific water quality issues is included below in Section 4.1 for each CRC basin (where available). Additionally, the GIS Project Database includes references to over 150 sites within the 21 CRC Basins where water quality has been measured by the USGS. These sites include direct links to the USGS NWIS database where field and laboratory analytical results can be reviewed. Links to this information can also be found in Appendix A.

4.0 Water Resources Overview

The following Section summarizes available data for each hydrographic basin traversed by the proposed CRC. The summaries include narrative descriptions of unique features within each basin, reconnaissance groundwater data including ranges in depths to groundwater, geology, subsurface flow characteristics, water quality, and other pertinent hydrogeologic information. In addition, a summary of existing water rights (Section 4.2) in each basin was developed based on records from the State Engineer's office. The objective of the water rights summary was to provide a quantitative overview of the existing appropriations in each basin within the Study Corridor. The overview also includes details on the status, type of use and approximate quantity of water currently utilized in each basin.

Each basin described in Section 4.1 has an accompanying GIS base map, which includes graphical representations of relevant information discussed in the following Sections and shown on the enclosed Plates. Note that each well, spring or stream site displayed on these GIS maps (Plates) is based on spatial information obtained from the NDWR Well Log Database and the USGS NWIS database. All USGS sites were assigned unique IDs specific to this project, and displayed on each accompanying basin map (referred to as "Project ID" in Appendix A and Appendix E). These USGS project IDs are also referenced in Figure captions for specific well hydrographs included in the following Sections.

The GIS maps (Plates) that correspond to each basin assessment (below) also include estimated depths to groundwater in each area within a basin where enough information was available to plot groundwater contour lines. These contour lines represent projected depths to groundwater in feet below ground surface (bgs) based upon interpretation of spatial groundwater level data included in the NWIS database for USGS well sites. Some of these USGS well sites list groundwater level data from the early 1900s to as recently as 2005. However, the reported dates of water level measurements in each basin vary, in some cases, significantly (by several years). In general, the USGS most consistently report groundwater levels between 1982 and 1984 and most wells included data either before 1982 or after 1984. Some wells even included data both prior to and after the 1982 to 1984 period. Generally, reported groundwater level measurements prior to 1982 were considered historical and groundwater level measurements in or after 1984 were considered recent. The groundwater depth contours shown in the basin maps are considered to be represent estimated depths to groundwater over recent years. Note however, in some areas where spatial coverage of data was lacking historical measurements were supplemented. In addition, reported measurements were also supplemented from groundwater levels included in NDWR well log data, which are based on the time each well was drilled.

Also included in the following Sections (4.1) for each basin are tables that provide a summary accounting (by type) of each NDWR well that was listed in the NDWR Well Log Database. There are also references (within each basin description) to the number of USGS wells in the basin. Note that generally, the number of USGS well sites does not always agree with NDWR wells listed in each basin. This is because the USGS only reports data on wells that it can access or are included in various projects that have taken place in the basin, while the NDWR Well Log Database (theoretically, but not always the case) includes every well that has been drilled in the basin.

4.1 CRC Basin Assessments

4.1.1 Fortymile Canyon – Jackass Flats (Basin 227-A)

Fortymile Canyon-Jackass Flats is an arid basin located within southwestern corner of the NTTR as shown in Plate 4-1. The basin boundary extends southwest to the southwestern boundary of the NTS north of Amargosa Junction, Nye County, and covers an area of approximately 250 square miles. The Fortymile Canyon-Jackass Flats basin has been extensively studied in conjunction with the Yucca Mountain Project. Some of the more recent reference material reviewed as part of this project related to the hydrogeologic aspects of particular interest included Belcher (2001, 2002, and 2004), Fenelon and Moreo (2002), Locke (2001) and USGS (2004).

The estimated perennial yield for this basin ranges from 880 acre-ft annually (Thiel, 1999) to 4,000 acre-ft annually (AFA) according to Turnipseed (1992). Based on a 1979 Designation Order by the State Engineer (NDWR, 1979), there are no committed resources in Fortymile Canyon (227A). However, as shown in Appendix B, NDWR's Water Rights Database lists nearly 60 AFA in committed resources for this basin. This discrepancy appears to be related to the location of the boundary of Fortymile Canyon (227A) and Amargosa Desert (230). Nearby groundwater production is from valley fill deposits at Amargosa Junction outside of and near the southern boundary of Fortymile Canyon (227A), which is common with the Amargosa Desert boundary.

Recharge in the entire Fortymile Canyon basin (227A and 227B) has been estimated to range from 690 AFA (D'Agnese, 1997) based on a percentage of mean annual precipitation to 2,330 AFA (D'Agnese, 1997) based on the Maxey-Eakin method. Average annual precipitation is approximately 3 to 4 inches (Czarnecki, 1984). There is no surface discharge of groundwater in the basin. Deep groundwater flow is to the south-southwest into the Amargosa basin area (Laczniak et al. 1996). Limited groundwater inflow from the north likely occurs in the poorly transmissive volcanic rocks.

Table 4-1. Groundwater Summary Basin 227A

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	690 to 2,330	
Subsurface Inflow	Minor	
OUTFLOW		
Evapotranspiration	Minor	
Springs	Minor	
Subsurface Outflow	Unknown	
Pumpage / Irrigation	200	Lopes and Evetts (2004) for 227A and 227B
COMMITTED RESOURCES	0 - 58	No committed resources based on boundary location from NDWR (1979), 58 AFA based on current Water Rights Database from State Engineers Office.
PERENNIAL YIELD	880 - 4,000	880 AFA (Thiel, 1999), 4,000 AFA (Turnipseed, 1992)
STORAGE	Unknown	

Most of the groundwater storage in the basin occurs in valley fill deposits at the southern end of the basin. Monitoring wells placed in the central parts of the basin generally are completed in saturated conditions in volcanic rocks at depths of 750 feet or more and in many cases below alluvial deposits. Most of these wells were installed for purposes of monitoring conditions at the Yucca Mountain Project and the NTS. The volcanic rocks generally exhibit low porosity and are not be suitable for groundwater production except in major fractured areas.

Within Jackass Flats (Basin 227A), 15 new or replacement wells are documented in the NDWR Well Log Database (NDWR, 2005), but only 3 of these are production wells and the remaining 12 are monitoring wells.

Table 4-2. Forty- Mile Canyon-Jackass Flats Existing Wells

Well Use	Number of Wells
Commercial	1
Domestic	2
Monitoring Well	12

The USGS NWIS database (USGS, 2005) included monitoring data from 88 wells in the basin. A review of this data indicated that groundwater levels vary widely from 38 to 2,145 feet (bgs).

Although water levels in Jackass Flats (Basin 227A) may appear to have been increasing in recent years, Fenelon and Moreo (2002) state that there is no statistically significant water level trend in the area. Data from monitoring well JF-3 (Figure 4-1) located in the southwestern part of the basin is typical of the reported changes in the water levels from aquifers within many parts of the volcanic rocks.

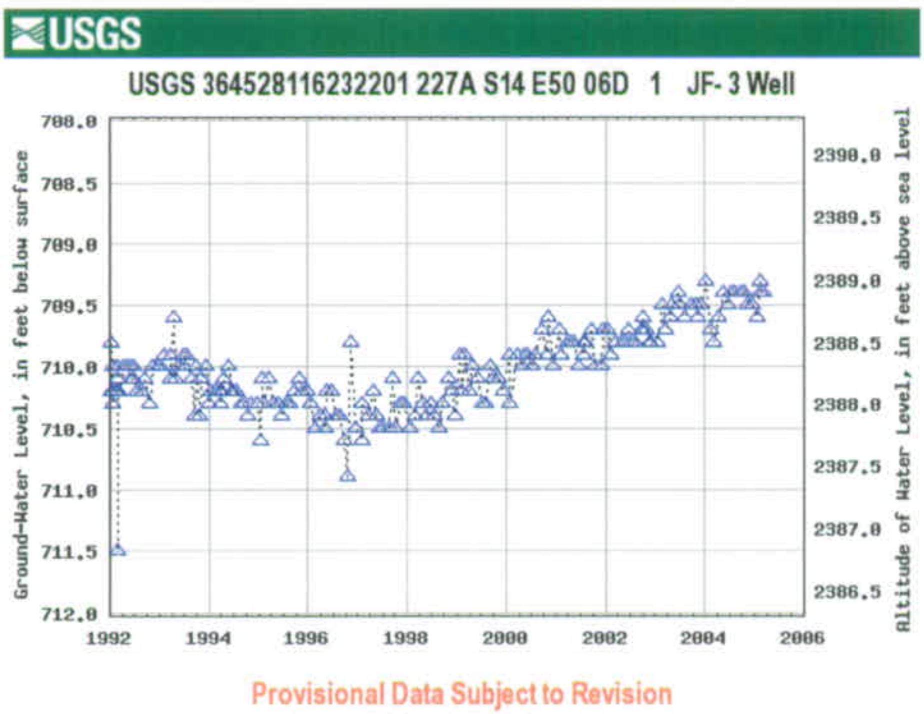

Figure 4-1. JF-3 Well (U-110)

The 3 production wells listed in the NDWR Well Log Database (NDWR, 2005) have been developed in valley fill near Amargosa Junction. The most recent, completed in 1984, had a static water level of 60 feet (bgs). Two older nearby wells also in valley fill have static water levels of 350 and 380 feet (bgs). Groundwater is very deep near the CRC, generally in the range of 700 to 1,200 feet (bgs).

Recent trends in groundwater levels within the lower-elevation basin fill area are represented by an NDOT well at the State park in Amargosa Junction (Figure 4-2). Although this well is located just outside the boundary of Basin 227A in Amargosa Basin, flow is considered to be continuous between these basins. Groundwater levels have generally remained stable at a depth of approximately 342 feet (bgs) during the time that the USGS has monitored this well. Fenelon and Moreo (2002) indicated significant groundwater declines farther south in Amargosa basin but this is not evident in Figure 4-2.

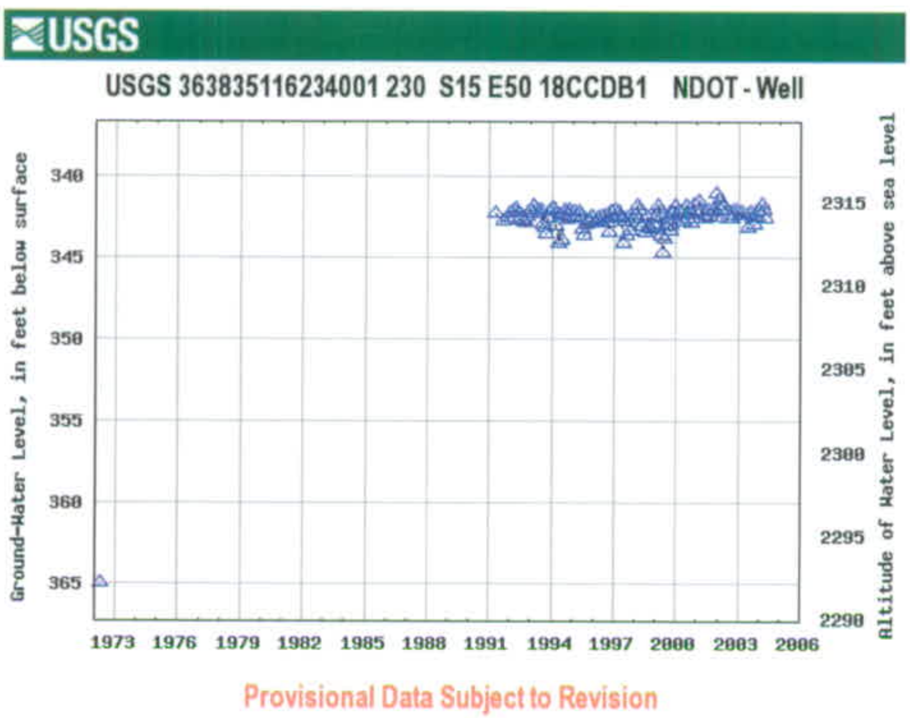

Figure 4-2. NDOT Well (U-26)

4.1.2 Crater Flat (Basin 229)

Crater Flat (Plate 4-2) is an arid basin located between the town of Beatty, Nevada and the southwestern corner of the NTS. It extends to the north from US 95 in Nye County, and covers an area of 182 square miles.

The perennial yield for this basin has been estimated to be in the range of 220 to 1,000 AFA (Thiel, 1999) with committed resources of 1,516 AFA (NDWR, 2004b). Average annual precipitation is approximately 4 to 5 inches (Czarnecki, 1984). Recharge in the Crater Flat has been estimated to be in the range of 119 AFA (D'Agnese, 1997) based on percentage of mean annual precipitation to 209 AFA (D'Agnese, 1997) based on the Maxey-Eakin method. There is no surface discharge of groundwater in the basin. Deep groundwater flow is to the south-southeast into the Amargosa basin area (Laczniak et al. 1996).

Table 4-3. Groundwater Summary Basin 229

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	209	
Subsurface Inflow	Unknown	
OUTFLOW		
Evapotranspiration	Minor	
Springs	Minor	
Subsurface Outflow	Unknown	
Pumpage / Irrigation	90	Lopes and Evetts (2005)
COMMITTED RESOURCES	1,516	
PERENNIAL YIELD	220 - 1,000	
STORAGE	Unknown	

Sixteen new or replacement wells are documented in the NDWR Well Log Database (NDWR, 2005), but only 4 of these are production wells. The remaining 12 are monitoring wells.

Table 4-4. Crater Flat Existing Wells

Well Use	Number of Wells
Industrial	2
Mining	1
Public Supply-Municipal	1
Monitoring Well	12

Groundwater is very deep near the CRC, generally in the range of 600 to 1,200 feet-bgs (Plate 4-2). The shallowest groundwater occurs where the CRC crosses the northwestern edge of the basin. Groundwater depths generally vary within the range of 180 to 650 feet (bgs) in what appears to be two separate productive aquifers. The shallow aquifer in well Crater Flat 1a (Figure 4-3) located at the former Daisy Gold Mine processing site reflects sharply declining water levels in this particular area. Production in this area is reportedly from clastic sedimentary rocks.

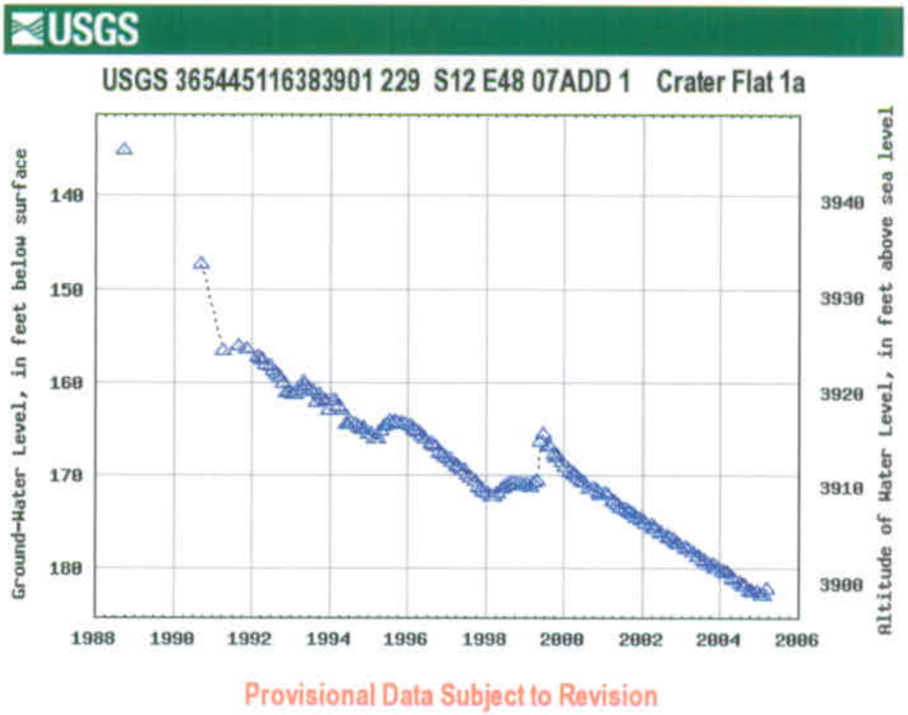

Figure 4-3. Crater Flat 1a Well (U-223)

In contrast, groundwater levels have been stable to slightly increasing in the nearby the Crater Flat 1 well (Figure 4-4) which is completed in a deeper aquifer within fractured volcanic rocks. Production well VH-1 (Figure 4-5) located in the southern part of Crater Flat also is screened in the deeper volcanic aquifer. Water levels in this aquifer have been mostly stable with time.

Limited water quality information is available in the Crater Flat basin. However, Thordarson (1987) reported that the deeper volcanic rock aquifer contains sodium bicarbonate water with TDS values of approximately 270 mg/l.

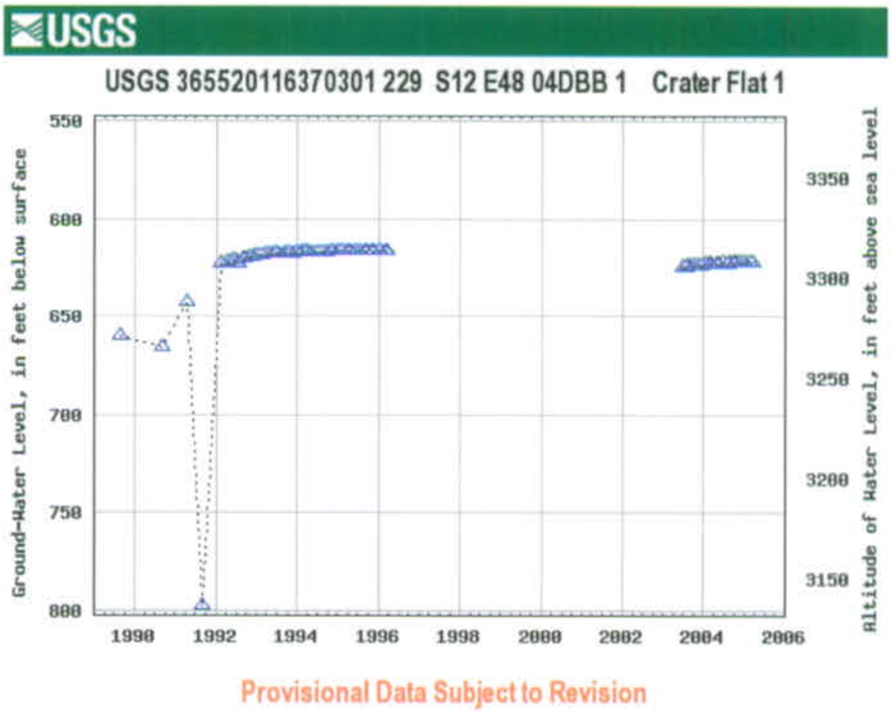

Figure 4-4. Crater Flat 1 Well (U-226)

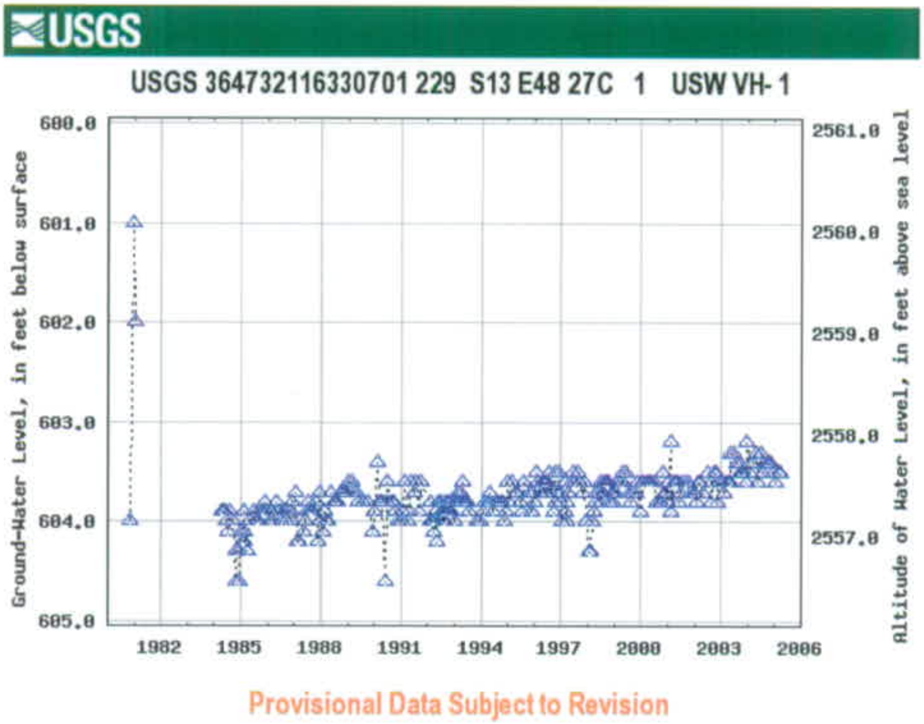

Figure 4-5. VH-1 Well (U-143)

4.1.3 Oasis Valley (Basin 228)

Oasis Valley (Plate 4-3) borders Gold Flat basin to the north, Sarcobatus Flat basin to the west, Amargosa Desert and Crater Flat basins to the south and Fortymile Canyon basins to the south and east (Rush, 1968b). Oasis Valley is located in Nye County and covers an area of 460 square miles (NDWR, 1992). Elevations range from 3,200 feet on the Amargosa River south of Beatty to 7,445 feet at Timber Mountain on the northeast. Except for some areas of Paleozoic carbonate and clastic rocks east of Beatty most of the rocks surrounding the basin are Tertiary volcanic rocks. Groundwater production is generally from alluvial fill along the Amargosa River and fractured zones in the volcanic rocks.

The perennial yield for this basin has been estimated to be in the range of 1,000 to 2,000 AFA (Thiel, 1999) with committed resources of 1,301 AFA (NDWR, 2004b). Estimates of total annual underground production for both municipal and non-municipal users are between 210 and 440 acre-feet (Reiner et al., 2002). Average annual precipitation in Oasis Valley is approximately 4 to 5 inches (Laczniak et al. 2001). Malmberg (1962) estimated recharge from precipitation to be 250 AFA. Most of the inflow to the basin is groundwater from adjacent basins, in particular from the Timber Mountain area to the east and Gold Flat basin to the north. Groundwater flow is generally from north to south (Laczniak et al. 1996). Malmberg (1962) estimated the total subsurface inflow to Oasis Valley to be approximately 1,800 AFA.

Total groundwater discharge from the basin was estimated to be 6,200 AFA, mostly as evapotranspiration (Reiner et al., 2002) and 2,400 by Malmberg (1962). Basin outflow to Amargosa Valley has been estimated at between 30 and 130 AFA (Reiner et al. 2002) and 400 AFA by Malmberg (1962). This occurs at the south end of the basin where shallow bedrock constricts flow to a shallow narrow channel alluvial. Bedrock flow is considered to be negligible in this area.

Table 4-5. Groundwater Summary Oasis Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	250	
Subsurface Inflow	1,800	
OUTFLOW		
Evapotranspiration	2,000	
Springs	Included with evapotranspiration	
Subsurface Outflow	400	
Pumpage / Irrigation	130	Lopes and Evetts (2004)
COMMITTED RESOURCES	1,301	
PERENNIAL YIELD	1,000	
STORAGE	Unknown	

Eighty-five new or replacement wells are documented in the NDWR Well Log Database (NDWR, 2005). The USGS NWIS database (USGS, 2005) lists water level data for 66 wells. Most water resources development in Oasis Valley has been from springs. Wells are typically shallow with static water levels from 8 to 150 feet (bgs). Production has generally been from alluvial basin fill material.

Table 4-6. Oasis Valley Existing Wells

Well Use	Number of Wells
Domestic	24
Industrial	1
Irrigation	3
Monitoring Well	40
Other	1
Public Supply-municipal	7
Stock	2
Test well	7

Most of the wells in Oasis Valley are completed in the shallow water table (within basin fill) and reflect seasonal variations in water levels. In recent years most wells reflect slight overall declines in water levels, which has apparently been the result of drier (than normal) conditions. IN late 2004 and 2005 levels have increased sharply reflecting the increased rainfall during this time. Examples of this include Narrows South Well 2 (Figure 4-6) located along the Amargosa River immediately south of Beatty Townsite and the Springdale Upper Well (Figure 4-7) located near Springdale. Groundwater depths along the CRC range from 10 to 150 feet (bgs) with the shallowest groundwater along the corridor northeast of Springdale.

Groundwater in much of Oasis Valley contains elevated levels of fluoride typically more than the 4 mg/l Nevada drinking water standard making it unsuitable for drinking water (Malmberg, 1962). Recently the Town of Beatty has installed wells in the Bullfrog Hills that have lower fluoride on the order of 1 mg/l for municipal water (Reiner et al., 2002).

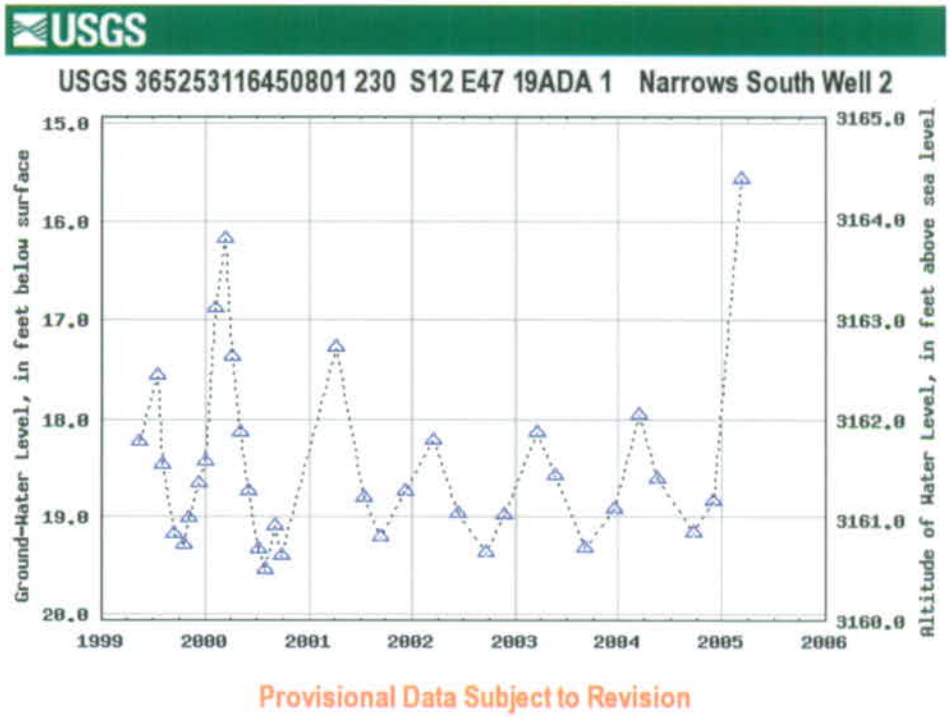

Figure 4-6. Narrows South Well 2 (U-212)

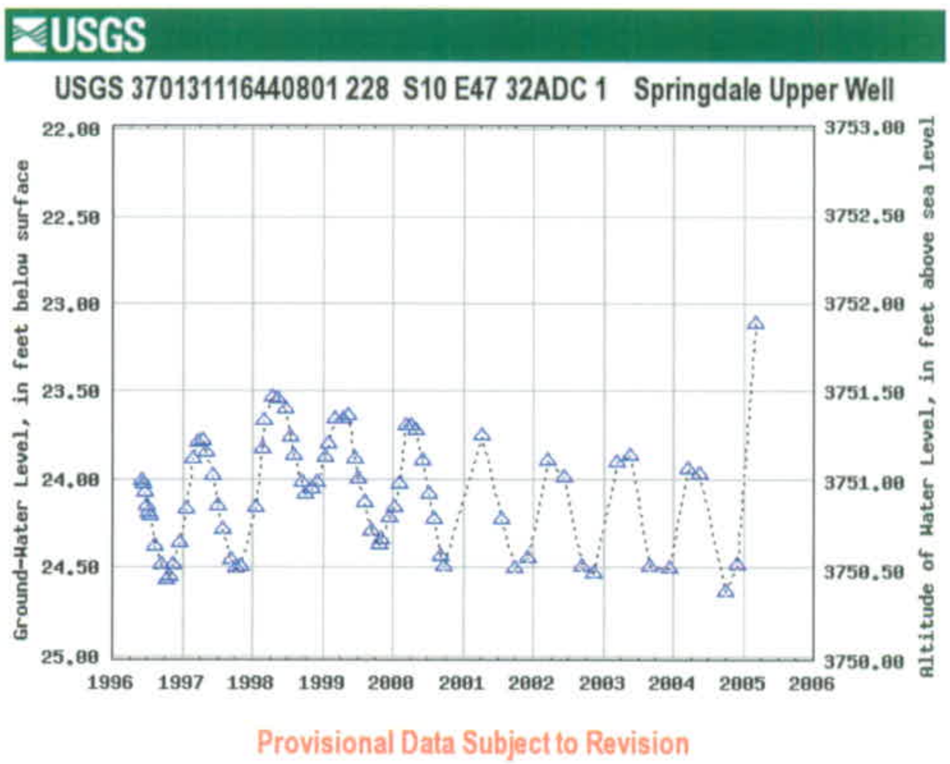

Figure 4-7. Springdale Upper Well (U-257)

4.1.4 Sarcabotus Flat (Basin 146)

Sarcobatus Flat (Plate 4-4) lies to the west of Oasis Valley basin and covers an area of 812 square miles (NDWR, 1992), mostly in Nye County with a small portion extending west into Esmeralda County. The settlement of Scotty's Junction lies in the central part of the basin. Tertiary volcanic rocks comprise the hills surrounding the basin. Elevations range from approximately 4,000 feet at Sarcabotus Flat playa to 8,740 feet in the Grapevine Mountains on the southwest and 8,275 feet at Stonewall Mountain to the north.

The perennial yield for Sarcobatus Flat has been estimated to be 3,000 AFA (NDWR, 1992) with committed resources of 3,586 AFA (NDWR, 2004b). Average annual precipitation in the Sarcobatus Flat is approximately 3.5 inches (Laczniak et al. 2001). Malmberg and Eakin (1962) estimated recharge from precipitation at 1,200 AFA. Basin inflow from Stonewall Flat and Gold Flat basins to the north was estimated to be 2,300 AFA (Malmberg and Eakin, 1962). Surface drainage within Sarcobatus Flat basin is internal to the Sarcobatus Flat playa. Estimates of water lost through evapotranspiration vary widely. Malmberg and Eakin (1962) suggested that about 3,000 AFA whereas Laczniak et al. (2001) suggested 13,000 AFA is lost to evapotranspiration. Malmberg and Eakin (1962) estimated aquifer storage in the basin fill at 24,000 ac-ft per foot of drawdown. Groundwater flow in the basin is generally from the northeast to southwest into Grapevine Canyon basin (Laczniak et al. 1996).

Table 4-7. Groundwater Summary Sarcabotus Flat

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	1,200	
Subsurface Inflow	2,300	
OUTFLOW		
Evapotranspiration	3,000	
Springs	Minor	
Subsurface Outflow	500	
Pumpage / Irrigation	110	Lopes and Evetts (2004)
COMMITTED RESOURCES	3,586	
PERENNIAL YIELD	3,000	
STORAGE	24,000 ac-ft	

Thirty-six new or replacement wells are documented on the NDWR Well Log Database (NDWR, 2005) and the USGS NWIS database (USGS, 2005) included 34 wells with water level data. The count of well type by use in the NDWR Well Log Database (NDWR, 2005) is provided in Table 4-8.

Table 4-8. Sarcabotus Flat Valley Existing Wells

Well Use	Number of Wells
Domestic	13
Industrial	2
Irrigation	10
Monitoring Well	4
Other	2
Public Supply-Municipal	4
Test well	1

Groundwater depths generally range from 4 feet to 677 feet (bgs) with most static water levels between 10 and 100 feet-bgs (Plate 4-4). Most of the wells are screened in valley fill alluvium; a few monitoring wells are completed in volcanic rocks on the west side of the basin. Data on changes in water levels with time are very sparse. One valley fill well, SF-2 (Figure 4-8), located about 2 miles west of Scotty's Junction, reflects slightly increasing water levels over a three-year record. Along the CRC, groundwater depths range from 20 to 180 feet (bgs) with the shallowest groundwater occurrence generally found in the area southeast of Scotty's Junction.

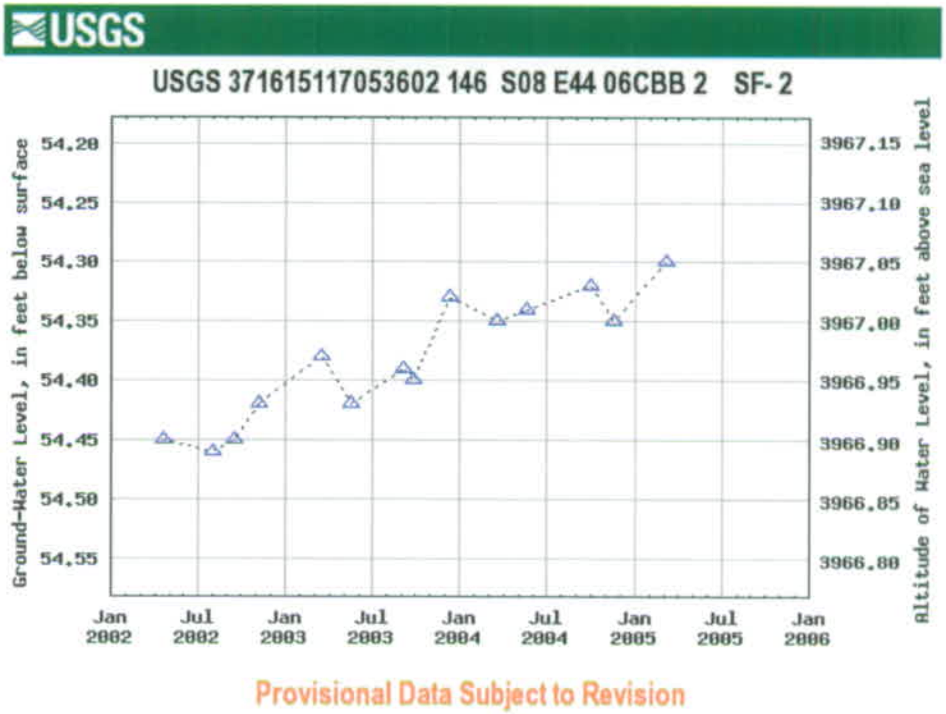

Figure 4-8. SF-2 Well (U-445

Well SF-1 (Figure 4-9), which is screened in volcanic rocks also shows a similar increasing water level over a recent three-year record. The BLM well TPJ-1 (Figure 4-10) located in the southeastern part of the basin shows generally stable groundwater levels (at a depth of 43 feet) since the start of observations in the 1950s.

Groundwater quality in Sarcobatus Flat contains relatively high levels of sodium bicarbonate with TDS values of approximately 540 mg/l (Malmberg, 1962).

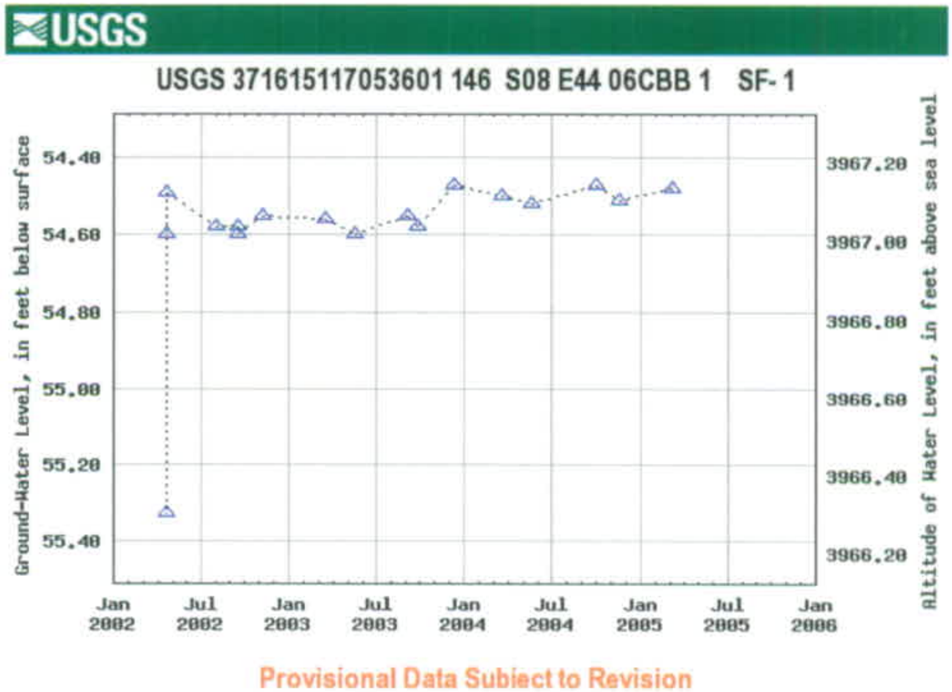

Figure 4-9. SF-1 Well (U-444)

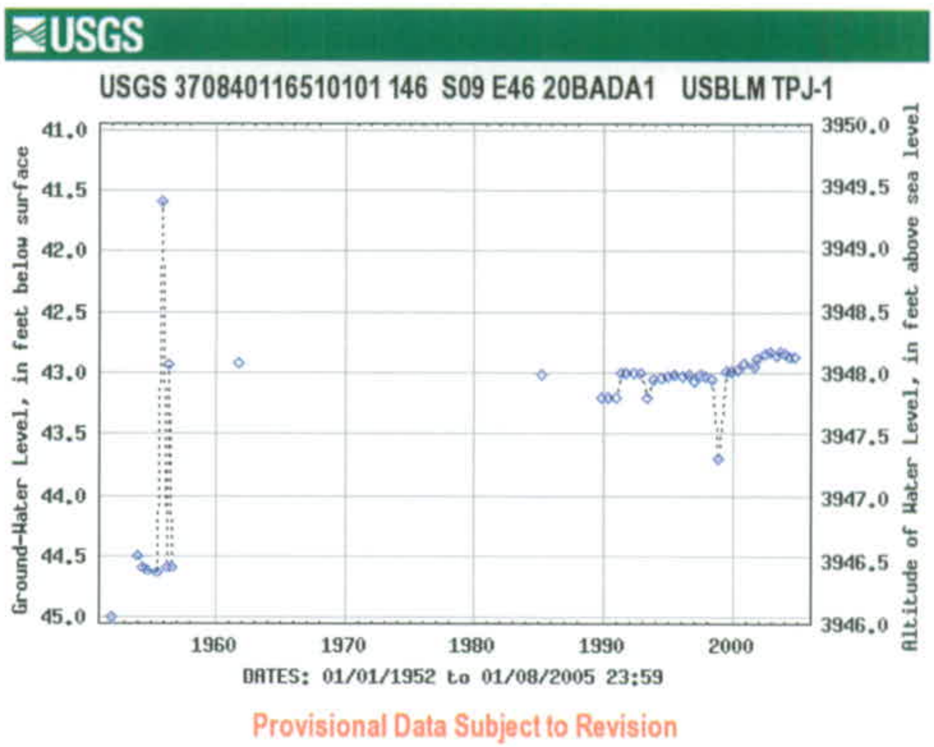

Figure 4-10. TPJ-1 Well (U302)

4.1.5 Lida Valley (Basin 144)

Lida Valley (Plate 4-5) lies to the north of Sarcobatus Flat basin and covers an area of 535 square miles (NDWR, 1992), mostly in Esmeralda County with a small portion extending east into Nye County near Lida Junction. The settlement of Lida is located in the western part of the basin.

The perennial yield for Lida Valley has been estimated to be 350 AFA with committed resources of 226 AFA (NDWR, 2004b). Average annual precipitation in the Lida Valley basin is approximately 5 to 6 inches (Laczniak et al. 2001). Rush (1968b) estimated recharge from precipitation to be 500 AFA. Inflow from Stonewall Flat basin was estimated at 200 AFA (Rush, 1968b). Surface drainage within Lida Valley basin is mostly internal to a playa in the southern part but could perennially drain into the Sarcobatus Flat playa (Rush, 1968b). Losses through evapotranspiration are considered to be negligible since there are no areas of phreatophytes in the Lida Valley basin except for a few small springs near Lida (Rush, 1968b). Historical springs near Lida provided 450 AFA of water for the town of Goldfield (Meinzer, 1917), but the pipeline for this was destroyed in 1919 and not rebuilt (Rush, 1968b). Rush (1968b) also estimated aquifer storage at 600,000 ac-ft.

Table 4-9. Groundwater Summary Lida Valley Basin

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	500	
Subsurface Inflow	200	
OUTFLOW		
Evapotranspiration	Minor	
Springs	10	
Subsurface Outflow	700	
Pumpage / Irrigation	40	Lopes and Evetts (2004)
COMMITTED RESOURCES	226	
PERENNIAL YIELD	350	
STORAGE	600,000 ac-ft	

Groundwater flow in the basin is to the northeast then southeast into Sarcobatus Flat basin (Rush, 1968b). Underground water production is limited to a few domestic wells, a municipal well at Lida and stock wells.

Table 4-10. Lida Valley Existing Wells

Well Use	Number of Wells
Commercial	1
Domestic	2
Industrial	1
Other	7
Public Supply-Municipal	4
Test well	2

Water level data is very sparse in the Lida Valley basin. The USGS NWIS database (USGS, 2005) lists only 8 wells located near Lida Junction. The hydrographs for two of these wells shown below have considerable water level data (Figure 4-11 and 12). Groundwater depths generally range from 26 feet at Lida Townsite to 360 feet (bgs) near Lida Junction. Along the CRC, groundwater depths range from 160 feet on the south edge of the basin to 290 feet (bgs) where the CRC enters the basin on the northeast (Plate 4-5). Water levels seem to be stable in the Lida Valley well but declining slightly in the Ralston well.

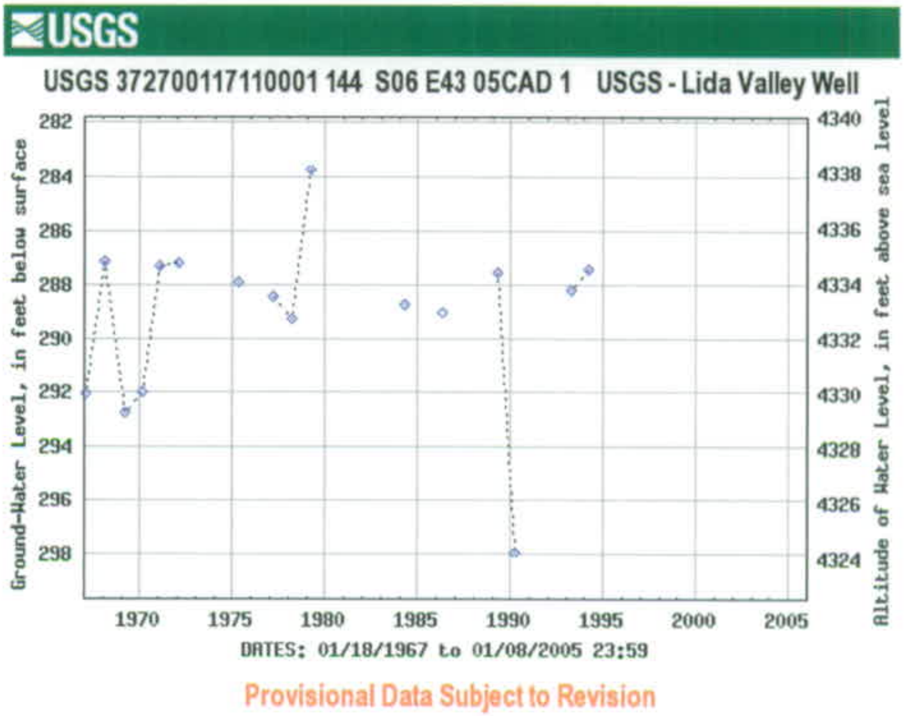

Figure 4-11. Lida Valley Well (U-512

Table 4-10. Lida Valley Existing Wells

Well Use	Number of Wells
Commercial	1
Domestic	2
Industrial	1
Other	7
Public Supply-Municipal	4
Test well	2

Water level data is very sparse in the Lida Valley basin. The USGS NWIS database (USGS, 2005) lists only 8 wells located near Lida Junction. The hydrographs for two of these wells shown below have significant water level data (Figure 4-11 and 12). Groundwater depths generally range from 26 feet at Lida Townsite to 360 feet (bgs) near Lida Junction. Along the CRC, groundwater depths range from 160 feet on the south edge of the basin to 290 feet (bgs) where the CRC leaves the basin on the northeast.

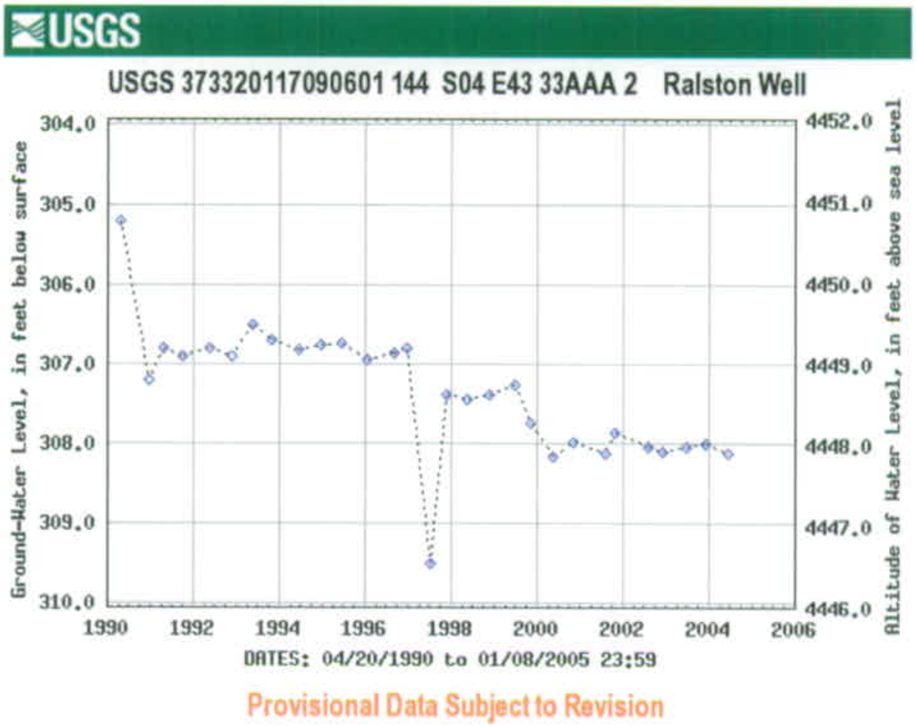

Figure 4-12. Ralston Well (U-518)

Rush (1968b) provides water quality data for 3 wells and 1 spring in the Lida Valley basin. Based upon specific conductance values ranging from 595 to 1,780 microsiemens per centimeter (μS/cm), TDS values in the range of 400 mg/l to 1,100 mg/l are indicated. The well having the highest specific conductance (located near Lida townsite) also contained sulfate of 284 mg/l other wells in the basin and Carter Spring reflected lower sulfate values of 61 to 188 mg/l.

4.1.6 Stonewall Flat (Basin 145)

Stonewall Flat (Plate 4-5) lies to the north of Sarcobatus Flat Basin and northeast of Lida Valley Basin. The basin covers an area of 381 square miles (NDWR, 1992) in Nye County near Lida Junction.

The perennial yield for Stonewall Flat has been estimated to be 100 AFA (NDWR, 1992) with committed resources of 12 AFA (NDWR, 2004b). Average annual precipitation in Stonewall Flat is approximately 5 to 6 inches (Laczniak et al. 2001). Rush (1968) estimated recharge from precipitation at 100 AFA. Groundwater inflow from Ralston Valley is possible but likely only a very minor amount. Surface drainage within Stonewall Flat is internal (Rush, 1968b). Losses through evapotranspiration are considered to be negligible since there are no areas of phreatophytes in the Stonewall Flat basin. Rush (1968b) estimated aquifer storage at 350,000 ac-ft. Groundwater flow in the basin is to the southwest with inflow (minor) from Ralston Valley and outflow to Lida Valley and Sarcobatus Flat (Rush, 1968b).

Table 4-11. Groundwater Summary Stonewall Flat Basin

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	100	
Subsurface Inflow	Unknown	Inflow from Ralston Valley unquantified.
OUTFLOW		
Evapotranspiration	Minor	
Springs	Minor	
Subsurface Outflow	200	
Pumpage / Irrigation	10	Lopes and Evetts (2004)
COMMITTED RESOURCES	12	
PERENNIAL YIELD	100	
STORAGE	350,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included only one well in the basin, an irrigation well installed in 1990. The USGS NWIS site references this as the Stonewall well but has no water level data.

Table 4-12. Stonewall Flat Valley Existing Wells

Well Use	Number of Wells
Irrigation	1

Water level data is very sparse in Stonewall Flat. The USGS NWIS database (USGS, 2005) lists only five wells of which only one has water level data as shown in Figure 4-13 below. No wells lie along the CRC so groundwater depths are uncertain. Based upon projection from nearby areas groundwater levels likely fall in the range of 120 to 200 feet (bgs).

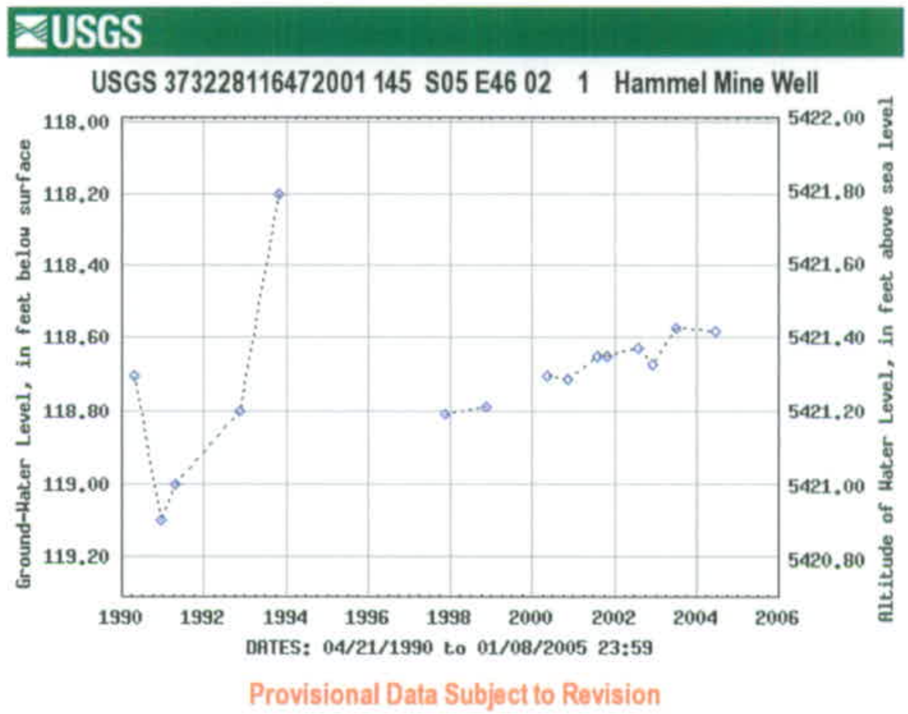

Figure 4-13. Hammel Mine Well (U-515)

Specific conductance measurements from 2 springs (Rush, 1968b) provide the only groundwater quality data for Stonewall Flat. Values of 282 and 418 μS/cm suggest TDS values of less than 300 mg/l.

4.1.7 Alkali Spring Valley (Basin 142)

Alkali Spring Valley (Plate 4-5) lies to the north of Lida Valley. It covers an area of 313 square miles (NDWR, 1992) in Esmeralda County northwest of Goldfield. Elevations range from 4,800 feet at the Alkali Spring Valley playa to 8,373 feet at Montezuma Peak on the south side of the basin (Rush, 1968b).

The perennial yield for Alkali Spring Valley basin has been estimated to be 3,000 AFA (NDWR, 1992) with committed resources of 1,708 AFA (NDWR, 2004b). Average annual precipitation in the Alkali Spring Valley is approximately 4 to 5 inches (Laczniak et al. 2001). Surface drainage within Alkali Spring Valley is internal (Rush, 1968b). Losses through evapotranspiration are estimated at 400 AFA (Rush, 1968b). Recharge through precipitation is estimated to be 100 AFA, and Rush (1968b) estimated aquifer storage to be 30,000 ac-ft within the upper 100 feet of saturated material. Groundwater flow in the basin is to the southwest with inflow from Ralston Valley of 5,500 AFA and 5,000 AFA of estimated outflow to Clayton Valley (Rush, 1968b).

Table 4-13. Groundwater Summary Alkali Spring Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	100	
Subsurface Inflow	5,500	
OUTFLOW		
Evapotranspiration	400	
Springs	Minor	Recharges to valley fill
Subsurface Outflow	5,000	
Pumpage / Irrigation	30	Lopes and Evetts (2004)
COMMITTED RESOURCES	1,708	
PERENNIAL YIELD	3,000	
STORAGE	30,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 20 wells in the basin, 9 are production wells, while the remainder are test or monitoring wells. Groundwater production is generally from valley fill alluvium. Static water levels in the basin generally range from 28 to 215 feet (bgs) as shown on Plate 4-5. The USGS NWIS database (USGS, 2005) lists 19 wells in the Alkali Spring Valley. Water depths range from 7 to 480 feet (bgs). Most of the USGS sites have only a single water level measurement. No wells lie along the CRC so groundwater depths are uncertain. Based upon projection from nearby areas they are likely in the range of 150 to 300 feet (bgs). Depths to groundwater are approximately 70 to 80 feet (bgs) near one of the alternative alignments for the CRC that passes near Goldfield.

Table 4-14. Alkali Spring Valley Existing Wells

Well Use	Number of Wells
Industrial	1
Mining	4
Monitoring Well	6
Other	1
Public Supply-Municipal	4
Test well	4

Alkali Spring located on the south side of the basin is the only significant spring in the basin. Meinzer (1917) indicated that the spring produced about 50 gpm at a temperature of 140 °F. The source of this spring is believed to be from volcanic rocks. Although this water was at one time used for a mill at Goldfield it currently is used only for stock watering. Most of the flow is re-introduced into the valley fill aquifer by infiltration within the alluvium (Rush, 1968b).

Water quality ranges widely in Alkali Spring Valley. Water at Alkali Spring is very high TDS sodium sulfate water type and has been described as unsuitable for irrigation (Rush, 1968b). Analyses from various wells however show generally good quality water (Rush, 1968b).

4.1.8 Ralston Valley (Basin 141)

Ralston Valley (Plate 4-6) lies northeast of Alkali Flat. It covers an area of 971 square miles (NDWR, 1992) in Nye County east of Tonopah and extends northwards 65 miles from Mud Lake to include the much higher terrain of the Toquima Mountains. Maximum valley width is about 20 miles. Elevations range from approximately 5,200 feet at Mud Lake playa to 10,600 feet in the Toquima Range in the north (Eakin, 1962).

Mountains surrounding the Ralston Valley consist mostly of Tertiary volcanic rocks in the central and southern parts, and Paleozoic carbonate or clastic rocks in the northern part. Average annual precipitation in the Ralston Valley ranges from about 4.7 inches at Tonopah to more than 8 inches at Belmont in the northern part of the basin, and more than 20 inches in the higher elevations (Eakin, 1962).

Groundwater is used mainly for municipal supply for Tonopah and for livestock. Production is principally from valley fill alluvium. Carbonate rocks in the northern part of the valley near Belmont produce water but yields have generally been low. Limited amounts of water have also been produced from volcanic rocks where fractured (Eakin, 1962).

The perennial yield for Ralston Valley has been estimated to be 6000 AFA (NDWR, 1992) with committed resources of 1,871 AFA (NDWR, 2004b). Eakin (1962) estimated recharge from precipitation at 16,000 AFA. Rush (1968); however, reduced this estimate to 5,000 AFA. Surface drainage within Ralston Valley is internal to the Mud Lake playa (Eakin, 1962). Losses through evapotranspiration occur mostly near the Tonopah well field where groundwater is shallow. Eakin (1962) estimated evapotranspiration at 2,500 AFA. Losses from underflow to Alkali Spring and Stonewall Flat basins are estimated to be 6,700 AFA (Eakin, 1962). Eakin (1962) estimated aquifer storage at 420,000 ac-ft within the first 100 feet of saturated material. Groundwater flow in the basin is to the south with approximately 7,000 AFA of inflow from Stone Cabin Valley in the southern part near Mud Lake and outflow to Alkali Spring Valley and Stonewall Flat (Rush, 1968b).

Most of the recharge in the basin is derived from the Toquima Range to the north and the Monitor Range to east of the basin. Infiltrated groundwater moves to the south within the alluvial valley fill. A bedrock constriction of the valley in T4N, R44E forces groundwater moving south in the valley to rise to near surface (Eakin, 1962). This is in the area of the Tonopah municipal well field where groundwater depths are generally less than 10 feet below surface. South of the constriction in T3N, groundwater depths are on the order of 400 to 500 feet (bgs) as shown on Plate 4-6.

Table 4-15. Groundwater Summary Ralston Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	5,000	
Subsurface Inflow	7,000	
OUTFLOW		
Evapotranspiration	2,500	
Springs		
Subsurface Outflow	6,700	
Pumpage / Irrigation	370	Lopes and Evetts (2004)
COMMITTED RESOURCES	1,871	
PERENNIAL YIELD	6,000	
STORAGE	420,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 39 new or replacement well entries in the basin and of those except 3 are production wells. Most of the wells lie in the central part of the valley and serve as municipal water supply for Tonopah.

Table 4-16. Ralston Valley Existing Wells

Well Use	Number of Wells
Domestic	10
Irrigation	2
Other	3
Public Supply-Municipal	12
Recreation	1
Stock	8
Test well	3

The USGS NWIS database (USGS, 2005) lists 29 wells in the Ralston Valley. Water depths range from 6 to 480 feet (bgs). Most of the USGS sites have only a single water level measurement. Groundwater depths in the lower part of the basin near Mud Lake are approximately 230 feet (bgs) as illustrated by the hydrograph for the Ralston Valley Well (Figure 4-14).

No wells lie along the CRC on the west side of Mud Lake so groundwater depths are uncertain. Based upon projection from nearby areas levels are likely in the range of 100 to 200 feet (bgs). Wells on the north side of Mud Lake indicate water depths along this part of the CRC to be between 140 and 220 feet (bgs) as shown on Plate 4-6.

Data on groundwater quality is sparse. Water in the northern and central part of the basin is reported to be good (Eakin, 1962). Eakin (1962) indicates that a well drilled near the Tonopah airport in the southern part of the basin encountered water consisting of high salinity at a depth of 800 feet (bgs). Welch and Williams (1987) show a well located 2 miles northwest of the Tonopah airport with a TDS value of 290 mg/l, but provide no other details.

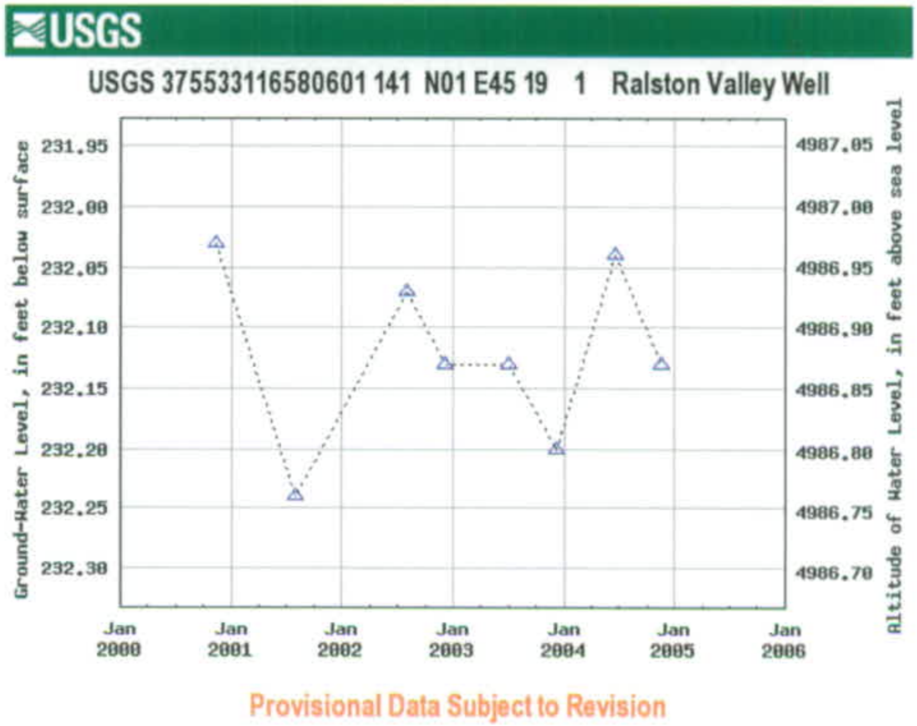

Figure 4-14. Ralston Valley Well (U-575)

4.1.9 Stone Cabin Valley (Basin 149)

Stone Cabin Valley (Plate 4-6) lies northeast of Ralston Valley. It covers an area of 985 square miles in Nye County east of Tonopah and extends north to include the much higher terrain of the Monitor Range and the Kawich Mountains to the east (NDWR, 1992). Elevation ranges from 5,200 feet at Mud Lake to 9,600 feet in the Monitor Range at the north (Eakin, 1962). The mountains surrounding the Stone Cabin Valley are composed mostly of Tertiary volcanic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks in some areas (Eakin, 1962).

Groundwater in the Stone Cabin Valley is used mostly for livestock and irrigation. Wells in the southern end of the valley provide water for the Tonopah Test Range. The perennial yield for this basin has been estimated to be 2,000 AFA (NDWR, 1992) with committed resources of 8,964 AFA (NDWR, 2004b). Average annual precipitation in the Stone Cabin is similar to that for Ralston Valley ranging from about 5 inches to more than 20 inches in the highest elevations (Eakin, 1962). Eakin (1962) estimated recharge from precipitation at 16,000 AFA. Surface drainage within Stone Cabin Valley is to the Mud Lake playa in the Ralston Valley. Losses through evapotranspiration occur mostly near the Stone Cabin Spring and Stone Cabin Ranch where groundwater is shallow. Eakin (1962) estimated evapotranspiration at 1,500 AFA and losses from underflow to Ralston Valley at approximately 7,000 AFA. Eakin (1962) estimated aquifer storage at 420,000 ac-ft within the upper 100 feet of saturated aquifer material. Groundwater flow in the basin is to the south with outflow to Ralston Valley near Mud Lake (Rush, 1968).

Table 4-17. Groundwater Summary Stone Cabin Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	16,000	
Subsurface Inflow	Minor	
OUTFLOW		
Evapotranspiration	1,500	
Springs	500	
Subsurface Outflow	7,000	
Pumpage / Irrigation	1,590	Lopes and Evetts (2004)
COMMITTED RESOURCES	8,964	
PERENNIAL YIELD	2,000	
STORAGE	420,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 32 new or replacement well entries in the basin, with most wells being used for irrigation purposes.

Table 4-18. Stone Cabin Valley Existing Wells

Well Use	Number of Wells
Domestic	4
Irrigation	20
Mining	1
Other	1
Public Supply-Municipal	1
Stock	4
Test well	1

The USGS NWIS database (USGS, 2005) lists 17 wells in the Stone Cabin Valley. Water depths generally range from 18 to 389 feet (bgs). Water level changes since 1990 have been small with some wells showing slight declines and others, slight increases. Regular water level measurements have been collected since approximately 1990 for several wells on the Tonopah Test Range (Figure 4-15) and at Reeds Ranch (Figure 4-16) in the southern part of the basin.

An apparent bedrock constriction in the central part of the valley in T4N, R48E Section 17 near Stone Cabin Ranch forces groundwater moving south in the valley to rise to near surface, much like in Ralston Valley (Eakin, 1962). Groundwater depths this area are only a few feet below surface. South of the constriction in T3N, groundwater depths are on the order of 100 feet (bgs). Groundwater depths in the lower part of the basin near Mud Lake are approximately 205 feet based on one well in T1S, R45E Section 2. Data on groundwater quality is very sparse. Groundwater depths along the CRC are in the range of 100 to 120 feet (bgs) based upon widely spaced wells. Water quality in the northern and central part of the basin is reported to be good.

Figure 4-15. Tonopah Test Range Well EH-6 (U-558)

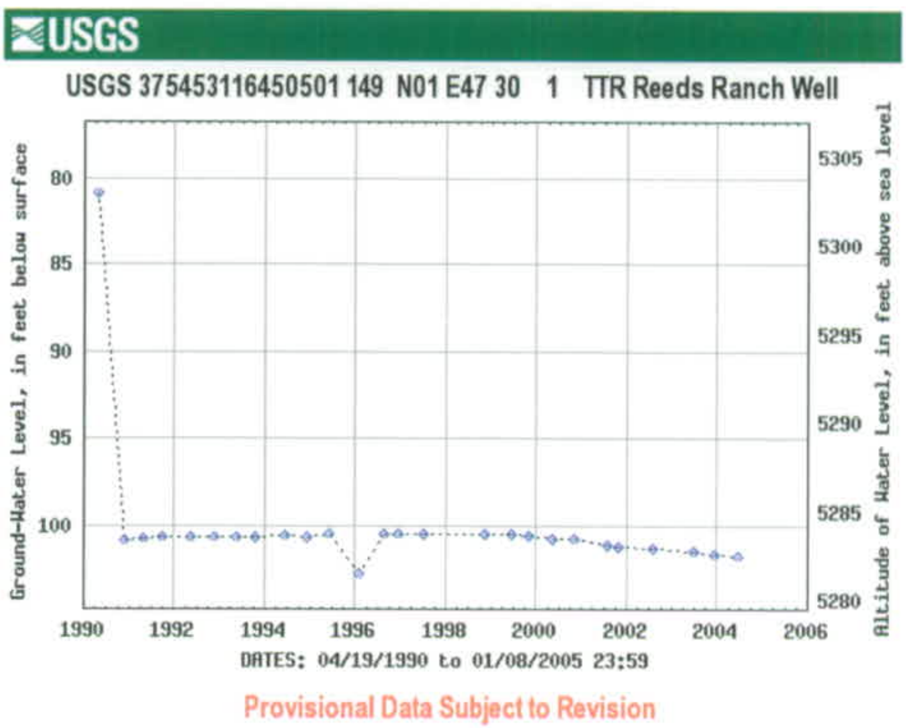

Figure 4-16. Tonopah Test Range Reeds Ranch Well (U-573)

4.1.10 Hot Creek (Basin 156)

Hot Creek (Plate 4-7) lies east of Stone Cabin and covers an area of 1,036 square miles in Nye County (NDWR, 1992). The basin includes the higher terrain of the Hot Creek Range and Kawich Range to the west and the Pancake and Reveille Mountains to the east. Elevations range from 5,100 feet at Twin Springs Ranch, the low point in the southeast part of the valley, to 6,134 at the divide in the southern end of the valley and about 9,000 feet in the Hot Creek Range at the north. Groundwater in the Hot Creek Valley is used mostly for livestock, irrigation, and domestic water.

Paleozoic age carbonate rocks make up much of the central part of the Hot Creek Range, and to a lesser extent, the central part of the Reveille Range. Most of the other areas in the Hot Creek, Reveille, and Kawich ranges consist of Tertiary and Quaternary volcanic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks and in carbonate rocks at Tybo in the central Hot Creek Range (Plate 4-7).

The perennial yield for Hot Creek basin has been estimated to be 5,500 AFA (NDWR, 1992) with committed resources of 4,220 AFA (NDWR, 2004b). Average annual precipitation in the Hot Creek Valley ranges from less than 8 inches more than 20 inches in the highest elevations (Rush, 1966). Rush and Everett (1966) estimated recharge from precipitation at 7,000 AFA. Surface drainage within Hot Creek is to the Twin Springs Ranch area through a topographic gap in the Pancake Range where shallow bedrock forces groundwater to near surface in this area. Springs exist in this area and water is collected in a small reservoir within the drainage at the gap. Both surface water and groundwater exit the basin at this point into the Railroad Valley basin. Losses through evapotranspiration occur mostly near Twin Springs Ranch where groundwater is shallow. Rush and Everett (1966) estimated evapotranspiration to be 4,600 AFA. Losses from underflow to Railroad Valley basin are estimated to be 700 AFA and surface flow is approximately 300 AFA. Van Denburgh and Rush (1974) indicate this surface flow to average 1,200 AFA. Subsurface inflow to the Hot Creek Valley from Fish Lake Valley is estimated at 200 AFA, according to Rush and Everett (1966). Rush and Everett

(1966) estimated aquifer storage to be approximately 2,300,000 ac-ft within the upper 100 feet of saturated material.

Along the CRC in the Hot Creek basin, groundwater depths range from 80 to 300 feet (bgs) with the shallowest area near the southern end of the basin (Plate 4-7). The depth to groundwater is approximately 60 to 80 feet (bgs) near an alternative alignment for the CRC that passes near Twin Springs Ranch.

Table 4-19. Groundwater Summary Hot Creek Basin

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	7,000	
Subsurface Inflow	200	
OUTFLOW		
Evapotranspiration	4,600	
Surface flow	300	1,200 AFA (Van Denburgh and Rush, 1974)
Subsurface Outflow	700	
Pumpage / Irrigation	1,500	Lopes and Evetts (2004)
COMMITTED RESOURCES	4,220	
PERENNIAL YIELD	5,500	
STORAGE	2.3 million ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 24 well entries in the basin. Seventeen are production wells and 8 of these are at Twin Springs Ranch in the southeastern part of the valley. The remainder of the wells in the basin are either test or monitoring wells.

Table 4-20. Hot Creek Basin Existing Wells

Well Use	Number of Wells
Domestic	3
Industrial	1
Industrial cooling	1
Irrigation	4
Monitoring Well	1
Stock	7
Test well	5

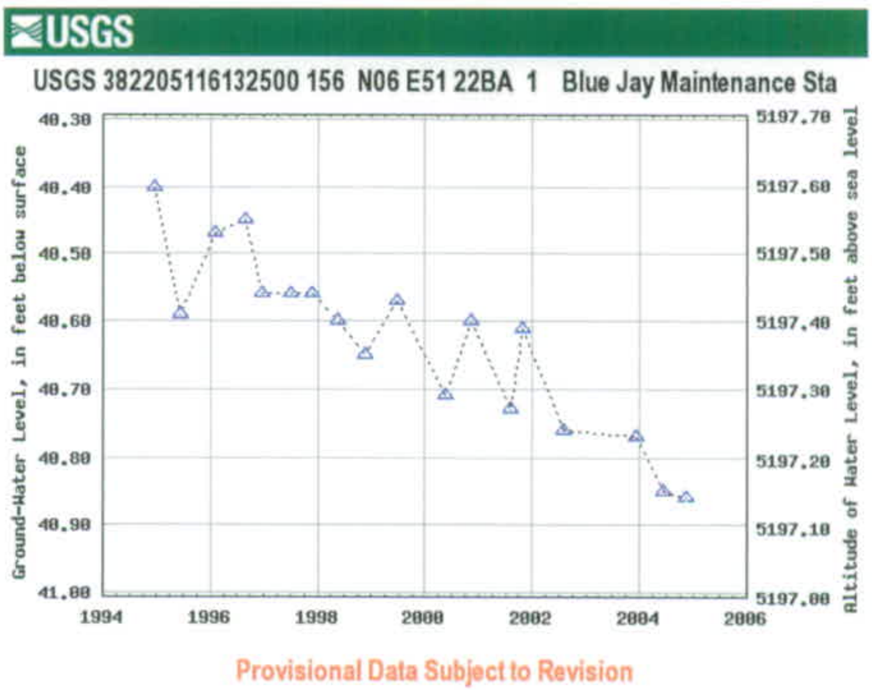

Figure 4-17. Blue Jay Maintenance Station Well (U-670)

The USGS NWIS database (USGS, 2005) lists 48 wells in the Hot Creek Valley, 12 of which are test wells. Groundwater depths range from 3 to more than 500 feet (bgs). The shallowest groundwater appears to occur between US Highway 6 and Twin Springs Ranch where depths are generally less than 60 feet (bgs). Groundwater levels measured at an NDOT site on Highway 6 have been declining in recent years (Figure 4-17), whereas near Twin Springs Ranch, levels have increased sharply in the early 1980s, but remaining stable since (Figure 4-18).

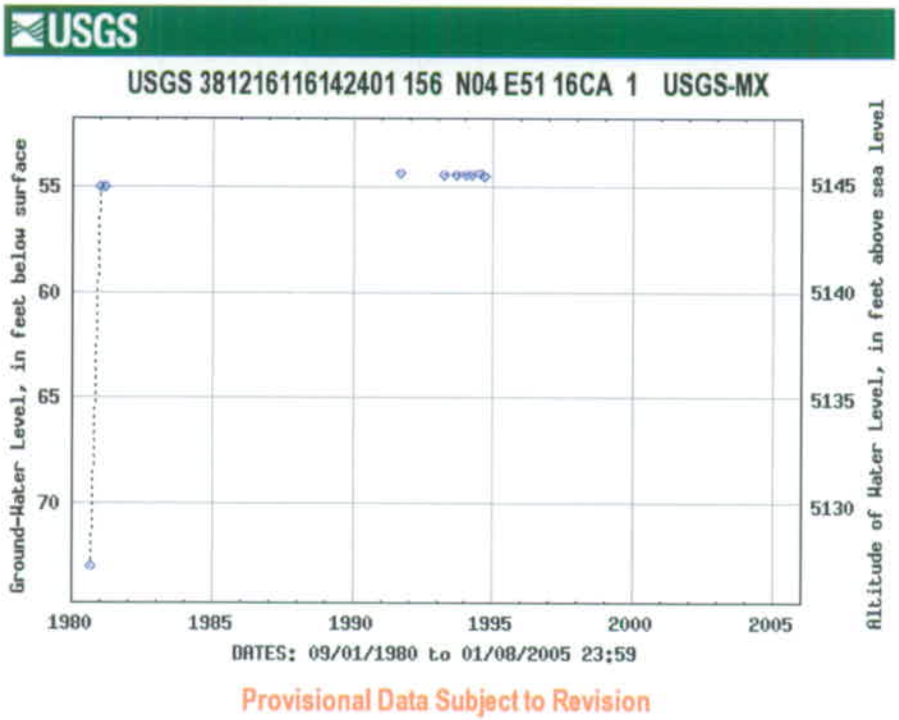

Figure 4-18 USGS-MX Well (U-604)

Rush and Everett (1966) describe the chemistry from 3 wells and four (4) springs in the Hot Creek basin. It was indicated that the water is a sodium bicarbonate type with TDS values in the approximate range of 250 mg/l to 2,500 mg/l based on specific conductance measurements. The USGS NWIS database (USGS, 2005) lists water quality data for eleven wells. The water is a sodium bicarbonate type with TDS values in the range of 176 to 1,910 mg/l. Based on this limited data, the lowest TDS values are in the area of shallow groundwater between US Highway 6 and Twin Springs Ranch. Higher TDS values occur in the area near Hot Creek in the northern part of the basin. Groundwater and springs near Hot Creek also have elevated fluoride levels in the range of 5 mg/l to 30 mg/l, which exceed the Nevada drinking water standard of 4 mg/l.

4.1.11 Railroad Valley South (Basin 173A)

Railroad Valley Southern Part (Plate 4-8) lies southeast of Hot Creek. The basin covers an area of 603 square miles (NDWR, 1992) in Nye County between Warm Springs and Rachel. A small portion of the basin extends into western Lincoln County in the Quinn Canyon Range. The basin is bounded by Kawich Range to the west to the Quinn Canyon on the east and Belted Range Ranges on the south. The southern Reveille Range is also included within the basin. Elevations range from 4,845 feet at the playa low point to about 9,200 feet in the Quinn Canyon Range at the east side. Groundwater in the Railroad Valley Southern Part is used mostly for livestock and irrigation.

Paleozoic age carbonate rocks make up a part of the Reveille Range, and a portion of the southern Quinn Canyon Range. Most of the other areas in the Kawich, Reveille, Quinn Canyon, and Belted Range consist of Tertiary and Quaternary volcanic rocks (Plate 4-8). Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks.

The perennial yield for Railroad Valley South basin has been estimated to be 2,800 AFA (NDWR, 1992) with committed resources of 3,890 AFA (NDWR, 2004b). Average annual precipitation in the Railroad Valley Southern Part ranges from less than 5 inches to 20 inches in the highest elevations (Van Denburgh and Rush, 1974). Van Denburgh and Rush (1974) estimated recharge from precipitation to be 5,500 AFA. Surface drainage is generally toward the playa. Subsurface drainage is split between about 4,300 AFA to Railroad Valley northern part and 1,000 AFA to Kawich Valley (Van Denburgh and Rush, 1974). Since groundwater at the playa is more than 15 feet deep losses to evapotranspiration in the basin are small. Van Denburgh and Rush (1974) estimated aquifer storage to be 400,000 ac-ft within the upper 100 feet of saturated aquifer material

Table 4-21. Groundwater Summary Railroad Valley Southern Part

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	5,500	
Subsurface Inflow	500	Ditch flow from Northern Railroad Valley
OUTFLOW		
Evapotranspiration	200	
Surface flow	None Reported	
Subsurface Outflow	5,300	Flow to Northern Railroad Valley and to Kawich Valley
Pumpage / Irrigation	2,250	Lopes and Evetts (2004) included both 173A and 173B
COMMITTED RESOURCES	3,890	
PERENNIAL YIELD	2,800	
STORAGE	400,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 17 new or replacement well entries in the basin with 15 being production wells. Table 4-22 shows the distribution by use. Crop irrigation has been occurring in the basin only in the area on the north edge of the playa and east of Highway 375.

Table 4-22. Railroad Valley Southern Part Existing Wells

Well Use	Number of Wells
Domestic	1
Irrigation	4
Stock	10
Test well	2

The USGS NWIS database (USGS, 2005) lists 19 wells in the Railroad Valley southern part, 6 of which are test wells. Groundwater depths range from 17 to more than 400 feet (bgs). Near the CRC in the southern part of the basin groundwater depths may be more than 300 feet in some areas based on data from only 2 wells. For the alternative alignment (northern route) of the CRC, groundwater depths range from 60 feet (bgs) where the corridor enters the basin on the north, to more than 200 feet (bgs) at the south end of the basin. The shallowest groundwater occurs in the northern part of the basin near highway 375 and Twin Springs Ranch where depths are generally less than 80 feet (bgs). Groundwater level data from wells shown in Figures 4-19 and 20 located in the central part of the basin reflect no discernable particular trend in groundwater levels over time.

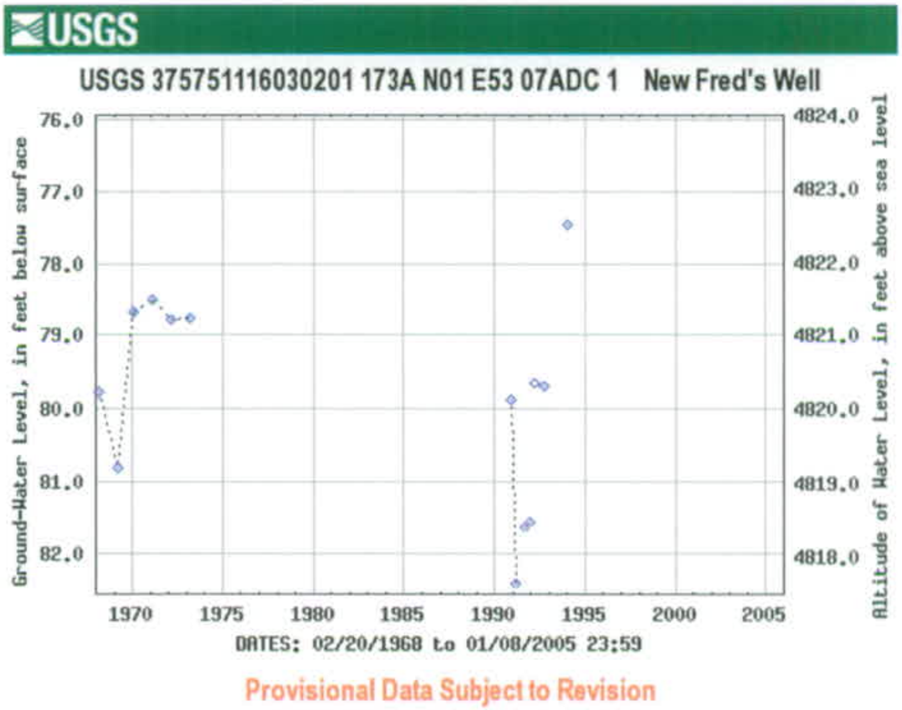

Figure 4-19. New Fred's Well (U-1377)

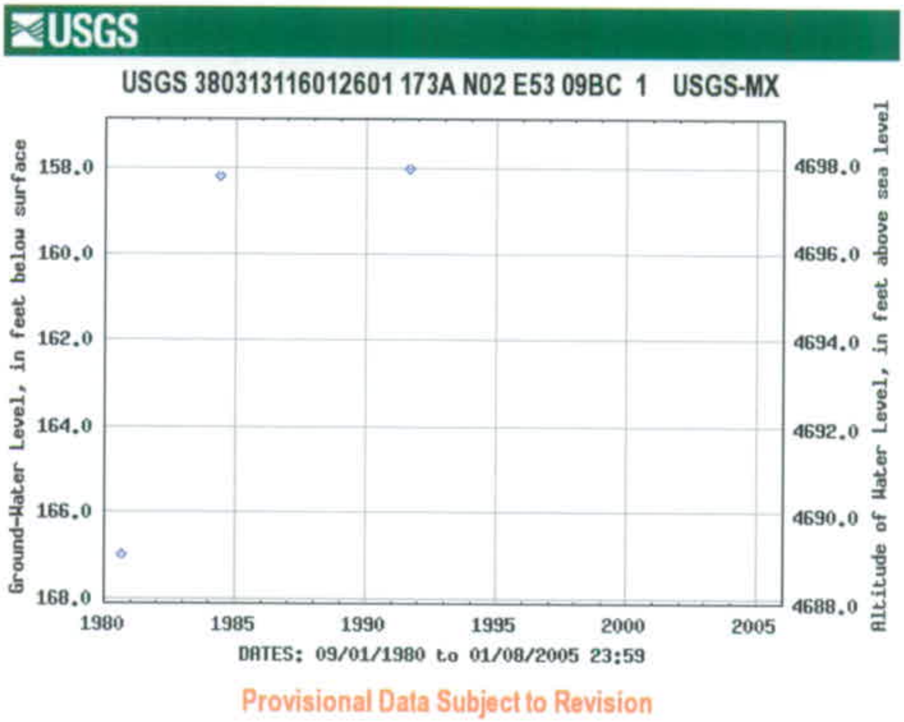

Figure 4-20. USGS-MX Well (U-1387)

Water quality varies within the basin, and except for the immediate vicinity of the playa where salinity is highest; most groundwater has relatively low TDS that is dominated by bicarbonate with either sodium or calcium as the primary constituents. The USGS NWIS database (USGS, 2005) lists water quality data for 4 wells in the basin. The water is a sodium bicarbonate type with TDS values in the range of 253 mg/l to 409 mg/l. One well had TDS value of 2,790 mg/l. Two wells had fluoride levels that exceed the 4 mg/l Nevada drinking water standard. USGS data from a few wells in the central part of the valley east of Highway 375 had fluoride values of 8 and 12 mg/l, respectively.

4.1.12 Railroad Valley North (Basin 173B)

Railroad Valley Northern Part (Plate 4-9) lies east of Hot Creek and north of Railroad Valley Southern Part. This basin covers an area of 2,149 square miles in Nye County and White Pine County (NDWR, 1992). The combination of Railroad Valley Northern Part and Southern Part comprises one of the largest closed drainage basins in Nevada extending more than 110 miles north-south and 15 to 25 miles in wide. It extends from the Pancake Range on the west to the White Pine, Grant, and Quinn Canyon Ranges on the east. Elevations range from 4,706 feet at the playa low point to 11,513 feet in the White Pine Northern Part. (Van Denburgh and Rush, 1974).

Paleozoic age carbonate rocks make up much of the White Pine and Grant Ranges, and a portion of the Quinn Canyon Range. Most of the other areas in the Pancake and Quinn Canyon Range consist of Tertiary and Quaternary volcanic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks. Petroleum is produced from wells in volcanic rocks in the central part of the basin (Van Denburgh and Rush, 1974). Although this is unusual occurrence petroleum has migrated from the source rocks into fractures in Tertiary volcanics from which the production is derived.

The perennial yield for Railroad Valley North basin has been estimated to be 75,000 AFA (NDWR, 1992) with committed resources of 26,633 AFA (NDWR, 2004b). Average annual precipitation in the Railroad Valley Northern Part ranges from less than 5 inches to 20 inches in the highest elevations (Van Denburgh and Rush, 1974). Van Denburgh and Rush (1974) estimated recharge from precipitation at 46,000 AFA. Surface drainage is toward the playa. Subsurface inflow is about 4,000 AFA from Railroad Valley southern part, 2,400 from Little Smoky Valley, and 700 from Hot Creek Valle. Total subsurface inflow was rounded to 7,000 AFA (Van Denburgh and Rush, 1974). Basin outflow in the subsurface is reported to be minor. Losses from evapotranspiration have been estimated at 80,000 AFA (Van Denburgh and Rush, 1974). Van Denburgh and Rush (1974) estimated aquifer storage to be 3,000,000 ac-ft for the upper 100 feet of saturated aquifer material.

Table 4-23. Groundwater Summary Railroad Valley Northern Part

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	46,000	
Subsurface Inflow	7,000	Also possible inflow from carbonate aquifer at Duckwater Springs
OUTFLOW		
Evapotranspiration	80,000	
Surface flow	None Reported	
Subsurface Outflow	Minor	
Pumpage / Irrigation	2,250	Lopes and Evetts (2004) included both 173A and 173B
COMMITTED RESOURCES	26,633	
PERENNIAL YIELD	75,000	
STORAGE	3 million ac-ft	

Note that the large imbalance between inflow and outflow in Table 4-23 may be explained in part by contributions to the valley fill aquifer from the carbonate aquifer.

Three large spring systems occur in the basin, at Duckwater in the northern part of the basin, Lockes in the west central part of the basin and Blue Eagle Spring along the central east margin. Duckwater flows at 11,000 AFA, Lockes flows at 2,400 AFA, and Blue Eagle at 3,000 AFA (Van Denburgh and Rush, 1974). Water from these not lost to evapotranspiration infiltrates into the valley fill aquifer. The carbonate aquifer may be the source for Duckwater Spring.

The NDWR Well Log Database (NDWR, 2005) included 152 new or replacement well entries in the basin. There are 115 production wells as indicated Table 4-24, which shows the distribution by use.

Table 4-24. Railroad Valley Northern Part Existing Wells

Well Use	Number of Wells
Domestic	23
Industrial	17
Industrial cooling	2
Irrigation	39
Mining	16
Monitoring Well	15
Other	13
Public Supply-municipal	7
Stock	11
Test well	9

As indicated in Table 4-24, irrigation is the main water use in the Railroad Valley Northern Part, which is mostly taking place in the area north of the playa.

The USGS NWIS database (USGS, 2005) lists 121 wells in the Railroad Valley northern part, 17 of which are test wells. Water depth ranges from –1 (above surface) to more than 291 (bgs). The shallowest groundwater occurs in the central part of the basin near the playa where depths are generally less than 50 feet (bgs). Groundwater along the short segment of the alternative alignment of the CRC in this basin is approximately 200 feet (bgs) (Plate 4-9).

The USGS NWIS database (USGS, 2005) lists water quality data for 26 wells and springs. The water is a sodium bicarbonate type with TDS values in the range of 208 mg/l to 732 mg/l. One particular spring sample had a fluoride level of 37 mg/l that exceeds the Nevada drinking water standard. Otherwise fluoride levels are acceptable for drinking water. During the late 1960s and early 1970s, the practice of ponding Eagle Springs oil field brine in the area north of the playa has seriously impacted shallow groundwater quality to the southwest of the disposal ponds (Van Denburgh and Rush, 1974).

4.1.13 Penoyer Valley (Basin 170)

Penoyer Valley (Plate 4-8) lies southeast of Railroad Valley- Southern Part. The basin covers an area of 700 square miles (NDWR, 1992) in western Lincoln County near Rachel. It is bounded from the Quinn Canyon Range on the north, Groom Range on the south, Belted Range on the west to the Tempiute Range, and Worthington Mountains on the east. Elevations range from 4,738 feet at the central playa low point to about 9,200 feet in the Quinn Canyon Range at the north side. Groundwater in the Penoyer Valley is used mostly for domestic and irrigation near Rachel. A few widely spaced stock wells are located in the northern part of the basin and a few mining wells are located in the Tempiute Range at the east side.

Paleozoic age carbonate rocks make up a part of the Worthington Range, a portion of the Tempiute Range, Groom Range and a small area of the Quinn Canyon Range near Queen city Summit. Most of the other areas in the Tempiute, Quinn Canyon, Groom, Belted and Tempiute ranges consist of Tertiary and Quaternary volcanic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks (Plate 4-8).

The perennial yield for Penoyer Valley basin has been estimated to be 4,000 AFA (NDWR, 1992) with committed resources of 14,461 AFA (NDWR, 2004b). Average annual precipitation in the Penoyer Valley is 5 inches, based on a 32-year period of record (Van Denburgh and Rush, 1974), but ranges to more than 20 inches per year in the higher elevations of the Quinn Canyon Range. Van Denburgh and Rush (1974) estimated recharge from precipitation at 4,300 AFA. Surface drainage is generally toward the playa, and there is no reported subsurface flow of groundwater from Penoyer Valley (Van Denburgh and Rush, 1974). Losses to evapotranspiration in the basin were estimated to be 3,800 AFA. Van Denburgh and Rush (1974) made no mention of irrigation in the Penoyer Valley but a large area west of Rachel has been under extensive irrigation since the 1960s, which would greatly increase the amount of evapotranspiration over the 3,800 AFA estimate. Van Denburgh and Rush (1974) estimated aquifer storage at 770,000 ac-ft within the upper 100 feet of saturated material.

Table 4-25. Groundwater Summary Penoyer Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	4,300	
Subsurface Inflow	Minor	
OUTFLOW		
Evapotranspiration	3,800	Probably much higher from irrigation
Surface flow	None Reported	
Subsurface Outflow	Minor	
Pumpage / Irrigation	12,560	Lopes and Evetts (2004)
COMMITTED RESOURCES	14,461	
PERENNIAL YIELD	4,000	
STORAGE	770,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 92 new or replacement well entries in Penoyer Valley, while the USGS NWIS database (USGS, 2005) lists 52 wells in the basin. Depths to groundwater range from 13 to more than 329 feet (bgs). The shallowest groundwater occurs near the playa where depths are generally less than 100 feet (bgs). Most of the high production rate irrigation wells are south of Highway 375 and west of Rachel. Groundwater depths along the CRC range from 180 to more than 300 feet (bgs) with the shallowest area at the southwest end. Groundwater levels have been declining since the 1960s, typically on the order of 30 feet-bgs (Figure 4-21).

Table 4-26. Penoyer Valley Existing Wells

Well Use	Number Of Wells
Commercial	1
Domestic	33
Industrial	1
Irrigation	47
Mining	6
Public Supply-Municipal	1
Stock	3

The USGS NWIS database (USGS, 2005) lists water quality data for only one well. The water is a sodium bicarbonate type with a TDS value of 280 mg/l. Van Denburgh and Rush (1974) include analyses from 45 wells where TDS based on specific conductance measurements is in the range of 300 mg/l to 700 mg/l.

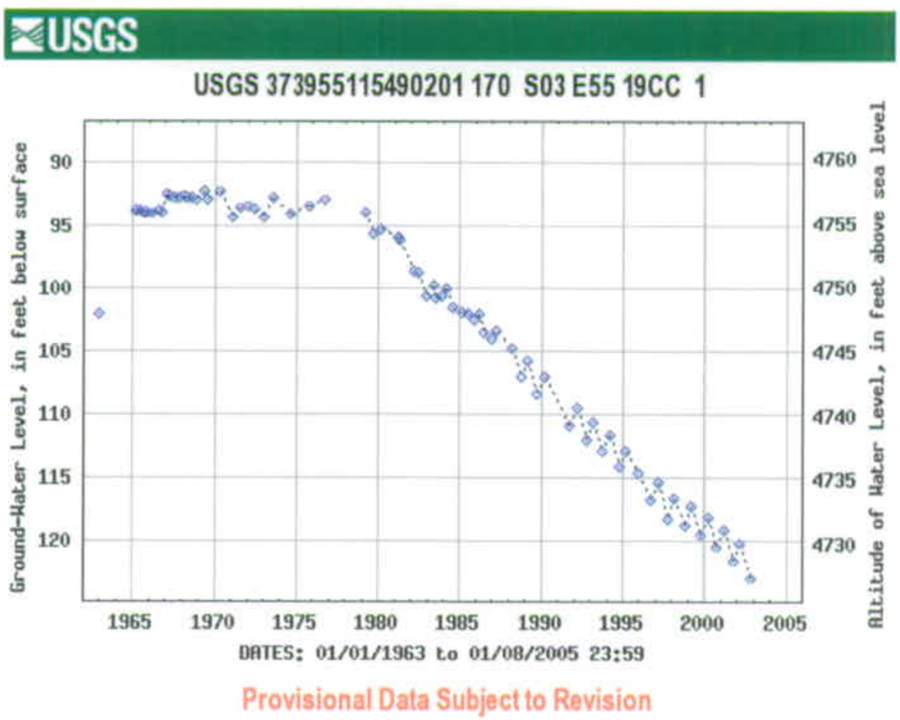

Figure 4-21. Penoyer Valley (unnamed) Well (U-1337)

4.1.14 Garden Valley (Basin 172)

Garden Valley (Plate 4-10) lies northeast of Penoyer Valley. It covers an area of 493 square miles (NDWR, 1992) in western Lincoln County and Nye near Rachel. The basin extends from the Quinn Canyon Range on the west, Grant Range on the northwest, Worthington Mountains on the southwest, and the Golden Gate Range on the east. Elevations range from 5,100 feet at the low point to about 11,300 feet in the Quinn Canyon.

Paleozoic age carbonate rocks make up a part of the Worthington Range, a portion of the Grant Range, and a small area of the Golden Gate Range. Most of the other areas in the Quinn Canyon, Grant, and Golden Gate ranges consist of Tertiary and Quaternary volcanic rocks, and Paleozoic clastic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks and carbonate rocks (Plate 4-10).

The perennial yield for Garden Valley basin has been estimated to be 6,000 AFA (NDWR, 1992) with committed resources of 454 AFA (NDWR, 2004b). Precipitation in Garden Valley ranges from 10 inches to more than 21 inches per year in the higher elevations of the Quinn Canyon and Grant Ranges. Eakin (1963a) estimated recharge from precipitation at 10,000 AFA. Surface drainage leaving the basin is reported to be minor. Subsurface flow of groundwater is to Coal Valley (Brothers et al. 1993) and is estimated to be 8,000 AFA. Losses to evapotranspiration in the basin were estimated at 1,500 AFA (Brothers et al. 1993). Groundwater flow is generally eastward toward Coal Valley basin. Eakin (1963a) estimated aquifer storage at several times the annual recharge within the upper 100 feet of saturated material. Brothers, et al. (1993) indicated that the combined storage of Garden Valley and the adjoining Coal Valley consisted of about 3,000,000 ac-ft of groundwater in the upper 100 feet of saturated aquifer material.

Table 4-27. Groundwater Summary Garden Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	10,000	
Subsurface Inflow	Minor	
OUTFLOW		
Evapotranspiration	1,500	
Surface flow	Minor	
Subsurface Outflow	8,000	To Coal Valley basin
Pumpage / Irrigation	30	Lopes and Evitts (2004)
COMMITTED RESOURCES	454	
PERENNIAL YIELD	6,000	
STORAGE	1.5 million ac-ft	One-half of estimated combined Garden Valley and Coal Valley storage.

The NDWR Well Log Database (NDWR, 2005) included 18 new or replacement well entries in the basin. Groundwater in the Garden Valley is used mostly for domestic and stock purposes.

Table 4-28. Garden Valley Existing Wells

Well Use	Number Of Wells
Domestic	6
Industrial	1
Industrial Cooling	1
Irrigation	5
Stock	2
Test Well	3

The USGS NWIS database (USGS, 2005) lists 26 wells in Garden Valley. Depths to groundwater range from 3 feet to more than 800 feet (bgs). The shallowest groundwater occurs in the northern part of the valley. Groundwater depths along the CRC vary from more than 300 feet near the north end of the Worthington Mountains to approximately 120 feet near where the corridor crosses the Golden Gate Range. Near the southern alternative alignment of the CRC, groundwater is very deep, generally 400 to 500 feet (bgs) except for the southern most area where the CRC passes through the water gap in the Golden Gate Range (Plate 4-10). In this area groundwater depth is approximately 120 feet (bgs).

The USGS NWIS database (USGS, 2005) lists water quality data for only 4 wells. The water is a calcium bicarbonate type with a TDS values in the range of 200 mg/l to 300 mg/l based on specific conductance measurements.

4.1.15 Coal Valley (Basin 171)

Coal Valley (Plate 4-10) lies east of Garden Valley. The basin covers an area of 460 square miles (NDWR, 1992) in western Lincoln County and Nye near Rachel. It extends from the Golden Gate Range on the west to the Seaman Range on the east. Elevations range from 4,950 feet at the low point to about 6,600 feet in the Seaman Range. Groundwater in Coal Valley is used mostly for stock water.

Paleozoic age carbonate rocks make up a part of the Golden Gate Range. Most of the other areas in Seaman and Golden Gate ranges consist of Tertiary and Quaternary volcanic rocks, and Paleozoic clastic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks and carbonate rocks.

The perennial yield for Coal Valley has been estimated to be 6,000 AFA (NDWR, 1992) with committed resources of 38 AFA (NDWR, 2004b). Precipitation in the Coal Valley is approximately 8 to 10 inches per year. Eakin (1963a) estimated recharge from precipitation at 2,000 AFA. There is generally no surface flow that leaves Coal Valley. Subsurface flow of groundwater is to Pahranagat Valley (Brothers et al., 1993) and is estimated to be 10,000 AFA, and overall groundwater flow is generally southeasterly. Losses to evapotranspiration in the basin were estimated as negligible. Eakin (1963a) estimated aquifer storage at several times the annual recharge within the upper 100 feet of saturated material. Brothers, et al. (1993) indicated that the combined storage of Garden Valley and the adjoining Coal Valley had about 3,000,000 ac-ft in the upper 100 feet of saturated material.

Table 4-29. Groundwater Summary Coal Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	2,000	
Subsurface Inflow	8,000	From Garden Valley
OUTFLOW		
Evapotranspiration	Minor	
Surface flow	Minor	
Subsurface Outflow	10,000	To Pahranagat Valley basin
Pumpage / Irrigation	30	Lopes and Evitts (2004)
COMMITTED RESOURCES	38	
PERENNIAL YIELD	6,000	
STORAGE	1.5 million ac-ft	One-half of estimated combined Garden Valley and Coal Valley storage (estimated).

The NDWR Well Log Database (NDWR, 2005) included 3 new or replacement well entries in the basin as shown in Table 4-30. The USGS NWIS database (USGS, 2005) lists 11 wells in Coal Valley. Water depths range from 100 to more than 800 feet (bgs). The shallowest groundwater occurs in the northern part of the valley and at the extreme south end.

Table 4-30. Coal Valley Existing Wells

Well Use	Number of Wells
Domestic	1
Irrigation	1
Test well	1

Groundwater depths along the CRC are generally poorly understood in Coal Valley. Where the CRC enters the basin on the west, groundwater is approximately 300 feet deep. Groundwater in the vicinity of the alternative alignment of the CRC is estimated to be approximately 100 feet (bgs) at the south end to more than 300 feet (bgs) in the north where it joins the main CRC (Plate 4-10).

The USGS NWIS database (USGS, 2005) lists water quality data for only one well. The water has a TDS value of 258 mg/l. The water is a calcium bicarbonate type with a TDS values in the range of 200 mg/l to 300 mg/l based on specific conductance measurements (Brothers et al. 1993).

4.1.16 White River Valley (Basin 207)

White River Valley (Plate 4-11) lies north of Garden Valley and Coal Valley basins and covers an area of 1,607 square miles (NDWR, 1992) in White Pine and Nye Counties. Settlements include Sunnyside in the southern part, and Lund and Preston in the north. It extends from the Grant and White Pine Ranges on the west to the Egan Range on the east. Elevations range from 5,100 feet at the southern end of the valley to about 11,493 feet in the White Pine Range.

Paleozoic age carbonate rocks make up much of the White Pine, Grant, and Egan Ranges. Groundwater is produced primarily from valley fill although water does occur in carbonate rocks (Plate 4-11).

The perennial yield for White River basin has been estimated to be 37,000 AFA (NDWR, 1992) with committed resources of 29,781 AFA (NDWR, 2004b). Precipitation in the White River Valley is approximately 10 inches per year (Maxey and Eakin, 1949). Maxey and Eakin (1949) estimated recharge from precipitation at 40,000 AFA. Surface flow out of the valley at the south end is estimated at 1,500 AFA. Losses to evapotranspiration in the basin were estimated to be 34,000 AFA. Subsurface outflow of groundwater is to Pahroc Valley and is estimated at 17,500 AFA (Maxey and Eakin, 1949).

Table 4-31. Groundwater Summary White River Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	40,000	
Subsurface Inflow	13,000	From Jakes Valley
OUTFLOW		
Evapotranspiration	34,000	
Surface flow	1,500	
Subsurface Outflow	17,500	
Pumpage / Irrigation	3,530	Lopes and Evitts (2004)
COMMITTED RESOURCES	29,781	
PERENNIAL YIELD	37,000	
STORAGE	Unknown	

The NDWR Well Log Database (NDWR, 2005) included 315 new or replacement well entries in the basin.

Table 4-32. White River Valley Existing Wells

Well Use	Number of Wells
Commercial	5
Domestic	140
Industrial	15
Industrial cooling	3
Irrigation	75
Monitoring Well	13
Other	6
Public Supply-municipal	5
Stock	43
Test well	10

The USGS NWIS database (USGS, 2005) lists 138 wells in White River Valley. Groundwater depths range from –1 (above surface) to more than 400 feet (bgs).

The shallowest groundwater occurs in the central and southern parts of the valley. For the short segment of the CRC that passes through White River Valley, groundwater depth is on the order of 80 feet (bgs).

The USGS NWIS database (USGS, 2005) lists water quality data that includes TDS values for 6 wells. The water generally has TDS values that range from 257 mg/l to 470 mg/l and is a calcium bicarbonate type.

4.1.17 Pahroc Valley (Basin 208)

Pahroc Valley hydrographic basin (Plate 4-12) is located between the Seaman Range to the west, North Pahroc Range to the east, Schell Creek Range to the northeast, Pahranagat Valley to the south, and White River Valley to the north and northwest. Pahroc Valley is approximately 43 miles along its central axis, 13 miles wide and covers 508 square miles (Scott, et al., 1971). The valley floor is a segment of a large topographic trough, which is a presently a dry streambed called the White River. The valley floor ranges in elevation from 6,050 feet on the alluvial fans to 3,085 feet at the south end of the valley where the White River enters Pahranagat Valley.

The hydrostratigraphy of Pahroc Valley has been well defined based on work of Winograd and Thordarson (1975) and Ertec Western (1981). Drici, et al. (1993) provided a general description of four (4) distinct hydrostratigraphic units defined by 1) alluvial sediments (younger and older valley-fill deposits); 2) carbonate rocks of the Bird Spring Formation and other units above the Eureka Quartzite; 3) Tertiary volcanics and 4) Precambrian and Cambrian clastic aquitard.

The Pahroc Valley basin is located in the Colorado River Flow System as defined by Harrill, et al. (1988) and is part of the regional interbasin flow system known as the White River Flow System. The depth to groundwater in most of Pahroc Valley in generally more than 200 feet (bgs), flowing from north to south, in most places, below the bottom of the younger valley fill. The source of groundwater in Pahroc Valley is mountain front precipitation and inflow from adjacent valleys (primarily White River Valley to the north). Estimates for total precipitation over Pahroc Valley vary from 57,000 (Eakin, 1963c) to 190,000 AFA (Scott, et al. 1971). Of that amount, approximately 2,200 AFA is introduced as recharge within the basin as estimated by Eakin (1963c), Kirk and Campana (1988) and Harrill, et al. (1988). Estimates for interbasin flow (as subsurface inflow) of groundwater into Pahroc Valley vary from 17,500 (Maxey and Eakin, 1949) to 40,000 AFA (Scott, et al., 1971) from White River Valley to the north. An additional 2,600 AFA of inflow was estimated in Brothers, et al. (1993) to originate from Dry Lake Valley to the east. Estimates of annual discharge from the Pahroc Valley resulting from evapotranspiration, spring discharge, and well discharge (mostly stock water) are negligible and therefore do not represent a significant source of groundwater discharge. However, discharge through subsurface flow is estimated to be 42,000 AFA along the southern boundary of Pahroc Valley into Pahranagat Valley (Scott, et al., 1971). Scott, et al. (1971) estimated that approximately 1,300,000 ac-ft of recoverable groundwater exists in the upper 100 feet of saturated aquifer material. Based on this information, the perennial yield for this basin has been estimated to be 21,000 AFA (NDWR, 1992).

Table 4-33. Groundwater Summary Pahroc Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	2,200	
Subsurface Inflow	17,500 – 42,600	From White River Valley (plus 2,600 from Dry Lake Valley)
OUTFLOW		
Evapotranspiration	minor	
Surface flow	Minor	
Subsurface Outflow	42,000	
Pumpage / Irrigation	minor	
COMMITTED RESOURCES	30	
PERENNIAL YIELD	21,000	
STORAGE	1.3 million (ac-ft)	Estimated for valley-fill reservoir only, does not include recoverable storage from regional carbonate aquifer

The NDWR Well Log Database (NDWR, 2005) included 16 new or replacement well entries in the Pahroc Valley basin as shown in Table 4-34. Most of the groundwater production in the basin appears to be for stock watering purposes. The USGS NWIS database (USGS, 2005) lists 6 wells in Pahroc Valley. Depths to groundwater generally exceed 200 feet (bgs) throughout most of the basin. Periodic groundwater level measurements from a BLM well near the proposed CRC have varied by more than 20 feet between 1963 and 1994 as shown in Figure 4-22.

Table 4-34. Pahroc Valley Existing Wells

Well Use	Number Of Wells
Domestic	3
Industrial	7
Industrial Cooling	1
Irrigation	2
Other	2
Stock	1

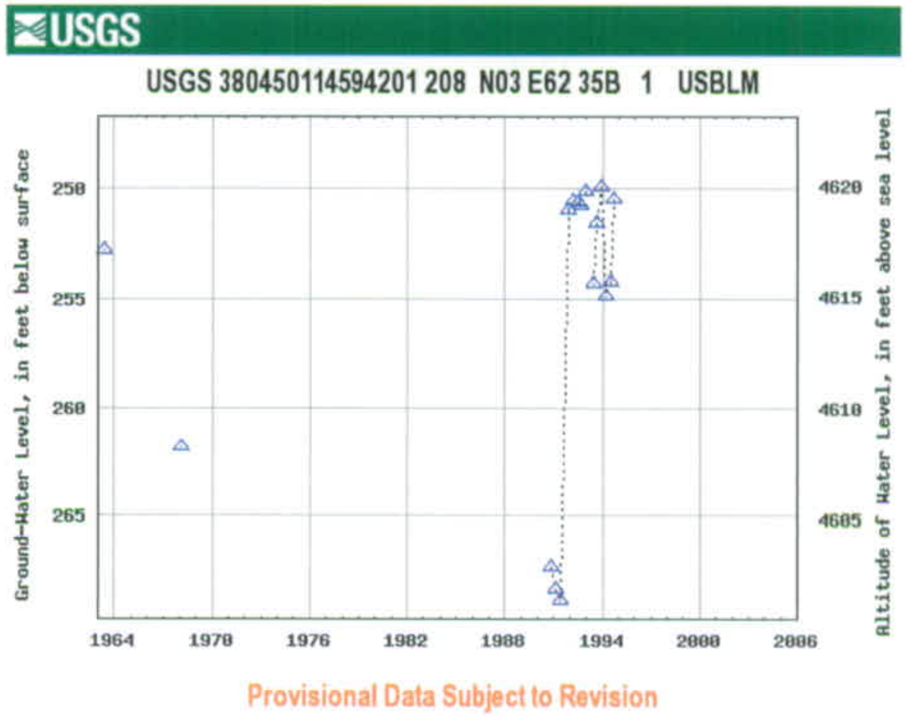

Figure 4-22. Pahroc Valley Well (BLM) (U-1390)

No water quality data were available for Pahroc Valley. However, Drici, et al. (1993) provided a possible range of values for water quality parameters for 7 springs and 3 wells just outside of the basin. Generally, water quality from sources in adjacent basins and relatively close to Pahroc Valley basin reflects specific conductance values that are less than 650 μS/cm, which corresponds to approximately 475 mg/l for TDS. Reported values for sulfate concentrations were generally less than 30 mg/l.

4.1.18 Dry Lake Valley (Basin 181)

Dry Lake Valley hydrographic basin (Plate 4-12) is located between the North Pahroc and Schell Creek Ranges Seaman Range on the west, the Fairview, Bristol, Highland and Chief Ranges on the east. Dry Lake Valley is approximately 59 miles along its central axis, 16 miles wide and covers 882 square miles (NDWR, 1992). Elevations range from 4,580 feet at the playa in the south end of the valley to 9,295 feet at Highland Peak in the Highland Range. Much of the crest of the Highland and Bristol Ranges exceeds 8,000 feet elevation. Topographically, Dry Lake Valley floor is higher than the adjoining basins on the east and west.

The hydrostratigraphy of Dry Lake Valley is outlined in Brothers, et al. (1996) as unconsolidated valley fill deposits and consolidated rocks consisting of Paleozoic carbonate, Paleozoic clastic rocks and Tertiary volcanic rocks. Unconsolidated alluvial materials and Paleozoic carbonates provide the best aquifer materials (Plate 4-12).

The Dry Lake Valley basin is located in the Central Region as defined by Harrill, et al. (1988) and is part of the regional interbasin flow system known as the White River Flow System. The depth to groundwater in most of Dry Lake Valley in generally more than 200 feet (bgs) and many places more than 800 feet (bgs), flowing from north to south. Shallow water at Bristol Well near the north end of the Bristol Range and one well south of Highway 93 in the southern part of the valley are considered to represent perched water zones (Eakin, 1963c). The source of groundwater in Dry Lake Valley is primarily mountain front precipitation. The reported estimate for recharge from precipitation over Dry Lake Valley is 5,000 AFA (Eakin, 1963c). Dry Lake Valley basin is considered to be an open basin in which all groundwater exits the valley to Delamar Valley basin then through a major fault zone to Pahranagat Valley (Brothers et al., 1996). There is no surface water except for occasional water in the playa after storms, and all surface drainage is internal to the basin.

Brothers et al. (1996) estimated that approximately 4,800,000 AFA of recoverable groundwater exists in the upper 100 feet of saturated aquifer material and an additional 800,000 AFA in the carbonate aquifer. Based on this information, the perennial yield of Dry Lake Valley has been estimated to be 2,500 AFA (NDWR, 1992), which is the value currently used by the State Engineer for management purposes.

Table 4-35. Groundwater Summary Dry Lake Valley

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	5,000	
Subsurface Inflow	Minor	
OUTFLOW		
Evapotranspiration	Minor	
Surface flow	None	
Subsurface Outflow	5,000	
Pumpage / Irrigation	60	Lopes and Evetts (2004)
COMMITTED RESOURCES	57	
PERENNIAL YIELD	2,500	
STORAGE	4.8 million ac-ft in alluvial aquifer 800,000 ac-ft in carbonate aquifer	Brothers et al., 1996

The NDWR Well Log Database (NDWR, 2005) included 21 new or replacement well entries in the Dry Lake Valley basin as shown in Table 4-36. Most of the groundwater production in the basin appears to be for stock watering purposes.

Table 4-36. Dry Lake Valley Existing Wells

Well Use	Number Of Wells
Domestic	2
Irrigation	5
Stock	5
Test Well	9

The USGS NWIS database (USGS, 2005) lists 12 wells in Dry Lake Valley. Depths to groundwater generally exceed 200 feet throughout most of the basin. Periodic groundwater level measurements from an MX well (Figure 4-23) on the west side of the basin show increasing water levels for the past 25 years.

Another MX well in the southern part of the basin (Figure 4-24) shows a similar increase although has generally remained more stable through recent years. A spring lies on the CRC corridor near the western edge of the basin but this likely reflects perched water and may not represent a reliable water supply. Generally groundwater along the corridor is more than 200 feet deep.

Water quality data was available for only 1 well in Dry Lake Valley in the USGS NWIS database (USGS, 2005). This had a TDS value of 377 gm/l. Sulfate was less than 30 mg/l and fluoride less than 1 mg/l.

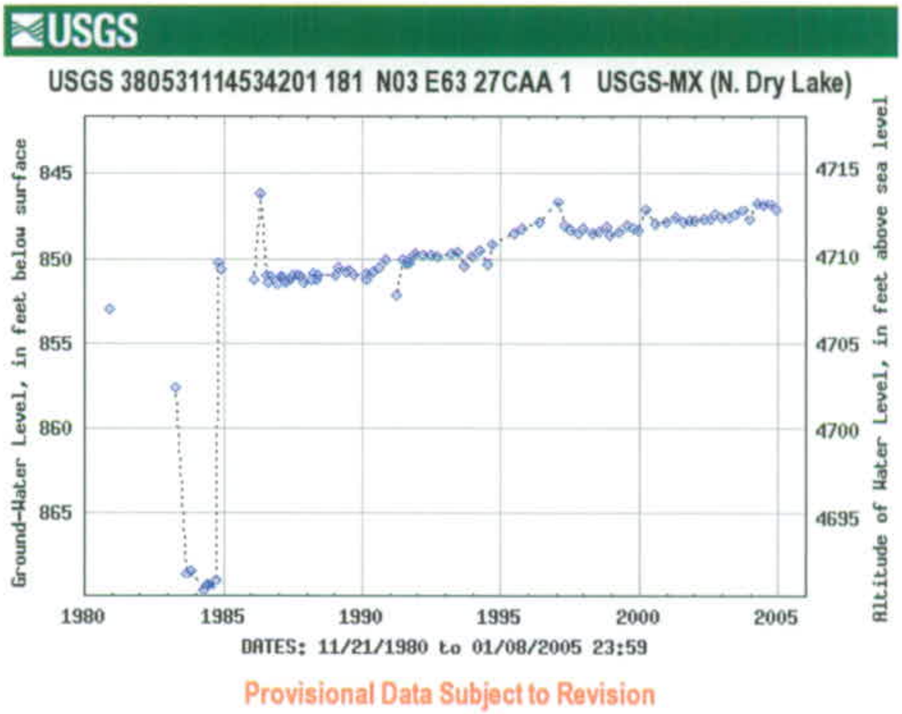

Figure 4-23. USGS-MX Well (N. Dry Lake) near west side of valley (U-1394)

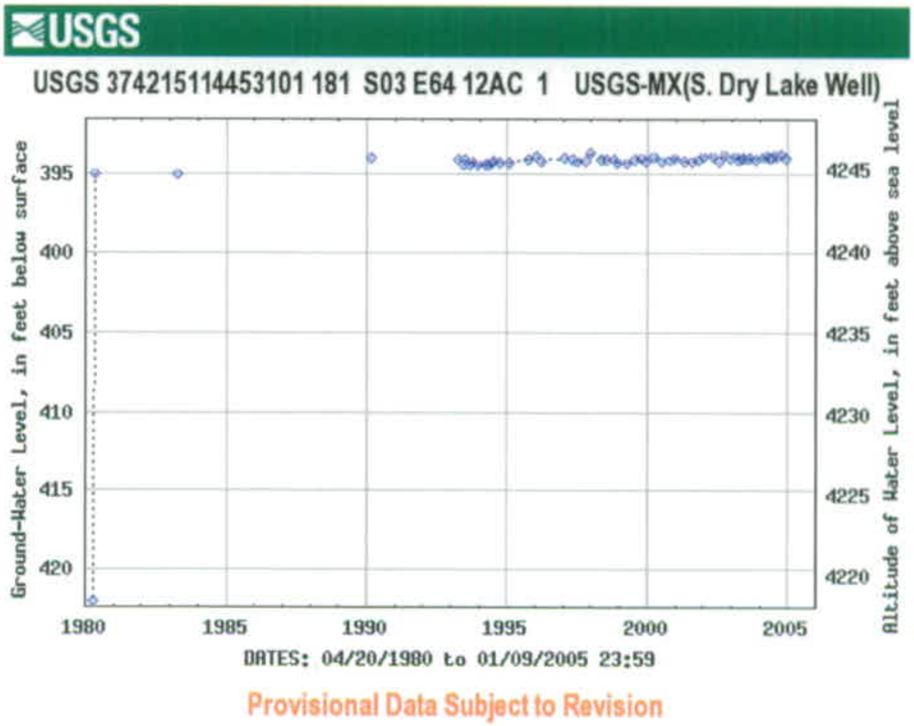

Figure 4-24. USGS-MX (S. Dry Lake) Well (U-1510)

4.1.19 Panaca Valley (Basin 203)

Panaca Valley (Plates 4-13a and 4-13b) lies east of Dry Lake Valley. The basin covers an area of 334 square miles (NDWR, 1992) in Lincoln County, which includes the town of Panaca. Panaca Valley is bound by the Chief and Highland Ranges on the west to the Mahogany Mountains and Cedar Mountains on the east, and from Cove Canyon near Caliente on the south to the Pioche Hills on the north. Elevations range from 4,400 feet at the low point near Caliente to about 9,295 feet at Highland Peak in the Highland Range. Groundwater in the Panaca Valley is used mostly for irrigation purposes.

Paleozoic age carbonate and clastic rocks make up the Highland Range and parts of the Chief Range and Pioche Hills. Most of the Mahogany Mountains and Cedar Mountains consist of Tertiary volcanic rocks and other crystalline rocks. Fine-grained Pliocene lakebeds form terraces at various places in the Panaca Valley. Groundwater is produced primarily from alluvial valley fill although low yielding wells have produced water from thin sand beds in the Panaca formation lakebeds. Water also occurs in fractured volcanic rocks and carbonate rocks. One large spring north of Panaca, Warm Spring, discharges from solution cavities in Paleozoic carbonate rocks (Rush, 1964).

The perennial yield for Panaca Valley has been estimated to be 9,000 AFA (NDWR, 1992) with committed resources of 33,410 AFA (NDWR, 2004b). Precipitation in the Panaca Valley is approximately 6.4 to 10.6 inches per year (Phoenix, 1948). Higher elevations of the basin near Highland Peak receive considerably more rainfall (on the order of 20 inches) (Rush, 1964). Phoenix (1948) estimated recharge from precipitation at 6,000 AFA. Surface flow into the basin from Meadow Valley Wash was estimated at 2,550 AFA and groundwater inflow is minor at 20 AFA. Phoenix (1948) also estimated the contribution to the valley from Warm Springs at 5,800 AFA and discharges from other springs at 300 AFA. Most of the discharge is as surface flow at the entrance to Cove Canyon where Phoenix (1948) measured it as 900 AFA. Subsurface flow of groundwater is to Lower Meadow Valley and is estimated to be 125 AFA. Losses to evapotranspiration in the basin were estimated at 13,440 AFA. Groundwater flow is generally toward the south, as shown in Plate 4-13b. Rush (1964) estimated aquifer storage to be 1,400,000 ac-ft within the upper 100 feet of saturated material.

Table 4-37. Groundwater Summary Panaca

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	6,000	
Subsurface Inflow	20	
Surface Inflow	2,550	
Springs	6,100	
OUTFLOW		
Evapotranspiration	13,440	
Surface flow	1,025	
Subsurface Outflow	125	
Pumpage / Irrigation	7,500	Rush (1964) - much greater now.
COMMITTED RESOURCES	33,410	
PERENNIAL YIELD	9,000	
STORAGE	1,400,000 ac-ft	

The NDWR Well Log Database (NDWR, 2005) included 228 new or replacement well entries in the basin as shown in Table 4-38. The USGS NWIS database (USGS, 2005) lists 28 wells in Panaca Valley. Groundwater depths range from –3 (above surface) to 200 feet (bgs) although most areas are less than 60 feet (bgs). The shallowest groundwater along the various segments of the CRC in this basin occurs in the central part of the basin along US Highway 93 where groundwater is generally less than 60 feet deep. Though poorly known, groundwater is likely to be deeper where the corridor exits the basin on the east and west sides.

Groundwater levels fluctuate seasonally in Panaca Valley but have generally declined 5-15 feet since the 1960s as illustrated by figures 4-38 and 4-39 below. Rush (1964) indicated that there were 60 irrigation wells and 5 municipal wells active in the Panaca Valley in 1963 recovering about 7,500 AFA of water. Nearly twice as many wells are currently operating in Panaca Valley creating a significant overdraft on the groundwater reservoir.

Table 4-38. Panaca Valley Existing Wells

Well Use	Number of Wells
Commercial	8
Domestic	92
Industrial	1
Irrigation	100
Monitoring Well	1
Other	1
Public Supply-municipal	8
Stock	8
Test well	9

The USGS NWIS database (USGS, 2005) lists water quality data for 10 wells or springs. Based on reported specific conductance measurements, the water generally has TDS values in the range of 230 mg/l to 770 mg/l. Phoenix (1948) lists 9 analyses of springs and wells in the Panaca Valley with TDS values ranging from 240 mg/l to 615 mg/l.

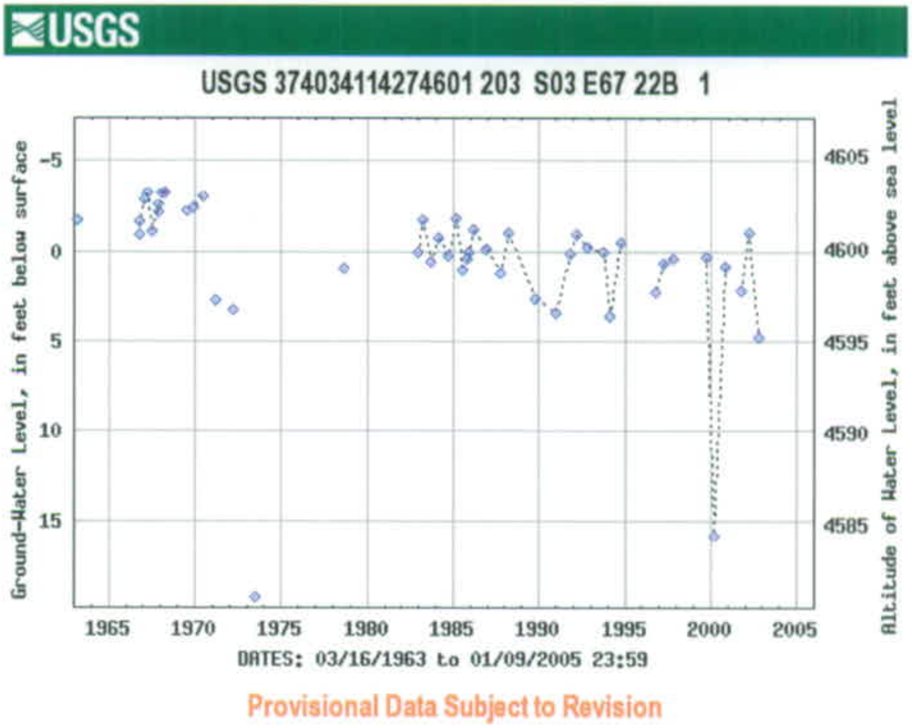

Figure 4.25 Water Level Decline in USGS Well (unnamed) (U-1506)

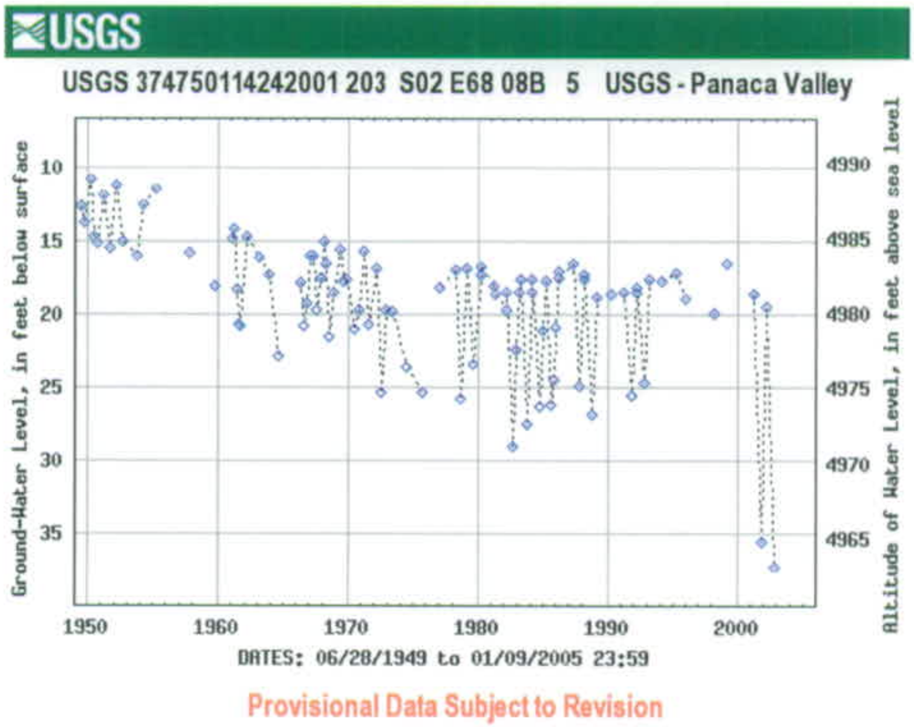

Figure 4.26 Water Level Decline USGS Panaca Valley Well (U-1531)

4.1.20 Escalante Desert (Basin 197)

Escalante Desert (Plate 4-14) is located east of Panaca Valley covering an area of 106 square miles (NDWR, 1992) in eastern Lincoln County east of Panaca. The basin extends from the Mahogany Mountains on the west and northwest to the Utah State line on the east. Elevations range from 5,675 feet at the low point near Uvada on the State line to 7,752 feet at Lodge Peak in the Mahogany Mountains. Groundwater in the Escalante Desert basin is used mostly for stock purposes. Most of the Mahogany Mountains consist of Tertiary volcanic rocks. Groundwater is produced primarily from valley fill although water does occur in fractured volcanic rocks.

Published data on water resources in the Escalante Desert basin is very sparse. The Utah Division of Water Rights database shows several wells at Modena approximately 9 miles east of the Nevada-Utah State line but does not list wells installed before 1991.

The perennial yield for this basin has been estimated to be 1,000 AFA (NDWR, 1992) with committed resources of 71 AFA (NDWR, 2004b). Based upon elevation and rainfall in the adjacent Panaca and Dry Valley basins (Rush, 1964) precipitation in the Nevada portion of the Escalante Desert basin is estimated at between 12 and 17 inches per year. The only likely source of inflow to the basin is recharge from precipitation within the basin. According to Glancy and Van Denburgh (1969) this amounts to 2,300 AFA. Groundwater is relatively deep so evapotranspiration is considered negligible. Except for minor amounts of pumped water, nearly all groundwater flows east to Utah.

Table 4-39. Groundwater Summary Escalante Desert Basin

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	2,300	
Subsurface Inflow	Minor	
OUTFLOW		
Evapotranspiration	Minor	
Surface flow	Minor	
Subsurface Outflow	2,300	To Utah
Pumpage / Irrigation	40	Lopes and Evetts (2004)
COMMITTED RESOURCES	71	
PERENNIAL YIELD	1,000	
STORAGE	190,000 ac-ft	Glancy and Van Denburgh (1969)

The NDWR Well Log Database (NDWR, 2005) included 8 new or replacement well entries in the basin as shown in Table 4-40. The USGS NWIS database (USGS, 2005) lists 4 wells in the Escalante Desert basin. Water depths range from 97 to more than 240 feet (bgs). Groundwater depths along the CRC range from 130 to 230 feet (bgs) based on only 2 wells. The USGS NWIS database (USGS, 2005) lists no water quality data for wells in this basin.

Table 4-40. Escalante Desert Basin Existing Wells

Well Use	Number of Wells
Irrigation	1
Other	1
Mining	2
Stock	4

4.1.21 Clover Valley (Basin 204)

Clover Valley (Plate 4-15) extends east from Caliente town site covering an area of 364 square miles (NDWR, 1992) in eastern Lincoln County. It is bounded on the north by the Cedar Mountains and on the south by the Clover Mountains.

The basin extends eastwards to the Utah State line. Elevations range from 4,395 feet at Caliente on the West Side of the basin to 7,555 feet at Sawmill Mountain on the south side of the basin.

Tertiary volcanic rocks make up the northern flank of the Clover Mountains and the Cedar Mountains. Basin fill deposits occur along Clover Valley Wash, near Caliente town site, and in the northeastern part of the basin. Wells have been developed in both the volcanic rocks and in basin fill deposits. Groundwater flow is toward the northwest from the Clover Mountains and through Clover Valley Wash and to the southwest from the Cedar Mountains towards Clover Valley Wash.

Table 4-41. Groundwater Summary Clover Valley Basin

Element	Quantity (AFA)	Notes
INFLOW		
Recharge from Precipitation	Unknown	
Subsurface Inflow	125	From Panaca Valley
Surface Inflow	1,025	From Panaca Valley
OUTFLOW		
Evapotranspiration	Unknown	
Surface flow	Unknown	
Subsurface Outflow		
Pumpage / Irrigation	120	Lopes and Evetts (2004)
COMMITTED RESOURCES	5,034	
PERENNIAL YIELD	1,000	
STORAGE	Unknown	

The NDWR Well Log Database (NDWR, 2005) included 34 new or replacement well entries in the Clover Valley basin as shown in Table 4-42. The USGS NWIS database (USGS, 2005) lists 22 wells in Clover Valley basin. Depths to groundwater range from 2.5 feet near Clover Valley Wash to more than 220 feet (bgs) in the higher elevation areas of the Clover Mountains. Groundwater depths along the short segment of the CRC range from less than 10 to approximately 50 feet (bgs) as show in Plate 4-15.

Table 4-42. **Clover Valley Basin** Existing Wells

Well Use	Number Of Wells
Commercial	3
Domestic	9
Irrigation	5
Monitoring Well	4
Other	2
Stock	7
Unused	4

The USGS NWIS database (USGS, 2005) contains very limited water quality data for the Clover Valley basin. Analyses are mostly for springs near Caliente where specific conductance measurements range from 40 to 518 μS/cm corresponding to TDS values of about 30 to 350 mg/l.

4.2 Description of Water Rights Data

The State Engineer's office maintains water rights records in Carson City and a database that provides summary information about each application and permit on file. The water rights database was used to develop abstracts for each basin within the Study Corridor, which contained quantitative summaries of water rights by status and use. Water rights abstracts for each basin within the Study Corridor are included in Appendix C.

Individual queries were also run on the database to provide a listing of basic information for all water rights meeting specific status criteria in each of the Study Corridor basins. Table 4-43 includes a summary of the fields included as "output" for each query and corresponding explanations for each field. Each basin-specific query included all surface and underground appropriations meeting the status criteria of Vested, Certificated, Decreed, and Permitted. It should be noted that these queries are subject to change (with time) and were run based on information in the State's water rights database on December 15,

2004. According to the State Engineer's office, information contained in the water rights database may have an 8 to 12 month lag in the time the office receives permit correspondence to when the database is updated.

Table 4-43 – Explanation of Water Rights Database Fields

BASIN	Refers to the Nevada hydrographic basin location in which the appropriation is assigned.
APP	Sequential number assigned to each application upon endorsement by State Engineer, priority determination is based on date associated with application number
CERT	Sequential number assigned to each certified permit.
DATE	Date associated with application number, used to identify and establish priority
STAT[1]	Designation of appropriated permit status (4 types considered for this project: decreed, vested, certificated, permitted)
SRC[2]	Type of source at the point of diversion (underground, surface or geothermal)
QQ	40-acre 'Quarter-Quarter' Section in legal description
QTR	160-acre 'Quarter' Section in legal description
SEC	1-sq.mile (640-ac) Section designation in legal description
TWN	Township, legal description
RNG	Range, legal description
CFS	Cubic feet per second, allowable diversion rate set out in the permit terms
USE[3]	Principle use, Nevada allows one principle use for each permit (some overlaps occur)
SUP	Supplemental right, or water right that has a pending change, if it includes dividing original right into several the original duty may not be exceeded
ACRES	Number of irrigated acres, for Irrigation permit types
DUTY	Amount of water the permit holder is allowed to divert annually is the limitation noted or amount specified and subject to court decree
UNIT[4]	Unit of measurement applied to permit duty
CO	County of record
Owner_of_Record	Current owner of record for designated permit. NDWR generally has an 8-month to 1-year lag on updating Owners of Record changes when filed. Note that in some cases NDWR does not receive Deed of Sale (for land transactions with water rights).

Notes:

[1] STAT (Appropriation Status):

DEC - Decreed water rights are subject to a court decree.

VST - Vested rights to surface waters are those rights for which the work to establish beneficial use was initiated prior to march 1, 1905, the date of adoption of Nevada's Water Law. Vested rights from an underground source are those rights initiated prior to March 22, 1913 for artesian water and prior to March 22, 1939 for percolating water. The process that determines the extent of all vested rights on a water source is called adjudication. Vested rights have a leading 'V' placed on the application number.

CERT - A perfected appropriation becomes certified with a unique certification number designation. Certification is granted once the proofs have all been filed and the other terms of the permit complied with. State Engineer then prepares a Certificate of Appropriation describing the use to be made of the water as shown on the Proof of Beneficial Use and the appropriation becomes certified.

PER - Permitted water rights are those that have been appropriated for beneficial use but are subject to availability of unappropriated water, existing rights, and the public interest. A permit to appropriate water grants the right to develop a certain amount of water from a particular source for a certain purpose and to be used at a definite location. The permitted right can become a perfected appropriation, or certified, only upon: 1) completion of the works of diversion; 2) the placing of the water to beneficial use; and 3) filing the proofs required.

[2]SRC (Underground, Surface, or Geothermal):

UG - Underground:

UG-	Underground (well)
OGW-	Other groundwater

SURF - Surface:

EFF-	Effluent
LAK-	Lake
OSW-	Other surface water
RES-	Reservoir
SPR-	Spring
STO-	Storage
STR-	Stream

GEO - Geothermal

[3] USE:

COM-	Commercial
CON-	Construction
DEC-	As Decreed
DOM-	Domestic
DWR-	Dewatering
ENV-	Environmental
IND-	Industrial
IRC-	Irrigation (Carey Act)
IRD-	Irrigation (DLE-Desert Land Entry)
IRR-	Irrigation
MM-	Mining and Milling
MUN-	Municipal
OTH-	Other
PWR-	Power
QM-	Quasi-Municipal
REC-	Recreation
STK-	Stockwatering
STO-	Storage
WLD-	Wildlife

[4] UNIT:

AFA-	Acre-feet annually
AFS-	Acre-feet seasonally
MGA-	Million gallons annually
MGS-	Million gallons seasonally

4.3 Appropriations Summary

Appropriations were summarized for each of the 50 Study Corridor Basins and categorized based on distance from the CRC in three (3) groups: 0-5 miles, 6-10 miles, and 11-20 miles. These locations as well as the 5, 10, and 20-mile limits are shown on Plates 4-16 through 4-18. Note that the 20-mile limit is also defined as the 40-mile buffer (Study Corridor), or 20 miles to each side of the CRC. The designated location for each water right is based on the location of the point-of-diversion (see Section 3) as specified on the permit. These locations are displayed by placing a highlighted boundary around the legal Section in which they are located. Note that the distance relationship to the CRC is based only on the location of the legal Township, Range, and Section (TRS). As an example, if a water right was located in a legal Section where any part of that Section fell within 5 miles of the CRC.

These water rights were also identified by whether or not they were located within any of 21 CRC basins (basins crossed by proposed CRC) or the 29 basins not crossed by the CRC, or non-CRC basins. Note the Study Corridor (40-miles wide centered about the main ROW for the CRC) includes all or parts of 50 total hydrographic basins, while the CRC includes all or parts of 21 total basins (referred to as CRC basins).

Based on queries that were run on the NDWR's Water Rights Database (see Appendix C), which included only Vested, Certificated, Decreed, and Permitted appropriations, there were a total of 1,628 water rights within the 40-mile Study Corridor, 793 of which are underground and 835 are surface water rights. Within the 21 CRC basins, there were 1,036 (out of 1,628) water rights meeting the criteria described above. Out of the 1,036 water rights in the 21 CRC basins, 436 are underground and 600 are surface water.

A summary accounting of existing water rights in CRC and Non-CRC basins is provided in Table 4-44. Table 4-45 includes a summary status for groundwater sources in each CRC basin, while Table 4-46 includes a summary status for groundwater sources in each Non-CRC basin. Appendix B provides more detailed summaries for groundwater sources by manner of use and current status for each of the Study Corridor Basins. Plates 4-16 thru 4-18 include graphical information on the locations of identified surface and underground water rights throughout the 40-mile Study Corridor. It should be noted that the "Committed Resources" column in Table 4-45 may not include all Decreed and Adjudicated appropriations. Generally in Nevada, most Decreed rights apply to surface water. Out of the 51 total Decreed rights included in Study Corridor basins for this project (meeting the applied query criteria) there are 12 Decreed appropriations that are underground.

Table 4-44 – Existing Basin Appropriation Summary

	No. of Underground Resources	No. of Surface Water Resources
CRC Basins	436	600
Non-CRC Basins	357	235

Table 4-45 – Basin Status Summary- CRC Basins (Groundwater Sources)

Basin Number	Size sq. mi.	Perennial Yield[1], AFA	Committed Resources[2], AFA	Pending Annual Duty[2], AFA	Designated[1]
141	971	6,000	1,871	0	Yes
142	313	3,000	1,708	0	No
144	535	350	226	0	No
145	381	100	12	0	No
146	812	3,000	3,586	0	Yes
149	985	2,000	8,964	5,120	Yes
156	1,036	5,500	4,220	11,200	No
170	700	4,000	14,461	3,808	Yes
171	460	6,000	38	0	No
172	493	6,000	454	14,784	No
173A	603	2,800	3,890	23	No
173B	2,149	75,000	26,633	201,695	No
181	882	2,500	57	11,584	No
197	106	1,000	71	0	No
203[3]	334	9,000	33,410[3]	0	Yes
204	364	1,000	5,034	0	No
207	1,607	37,000	29,781	93,728	No
208	508	21,000	30	0	No
227A[4]	279	24,000	58	5	No
228[4]	460		1,301	200	Yes
229[4]	182		1,516	46	No

Notes:

[1] Perennial Yield estimates based on NDWR- Division of Water Planning (1992).

[2] Data subject to change, current as December 2004. Pending duties are based on the total applications for appropriations yet to be developed and/or permitted. Committed resources may not include Decreed and Adjudicated rights.

[3] At the time data was collected, Basin 203 had not been supplementally adjusted and as a result, may include supplemental duties as well as duties associated with applications scheduled to change.

[4] Perennial yield estimate for Basins 225 - 230 = 24,000 AFA combined based on NDWR (1992). State Engineer uses 24,000 AFA for Basin 230 for planning purposes (verbal communication, NDWR). See Section 4.1 for more information.

Table 4-46 – Basin Status Summary- Non-CRC Basins (Groundwater Sources)

Basin Number	Size sq. mi.	Perennial Yield[1], AFA	Committed Resources[2], AFA	Pending Annual Duty[2], AFA	Designated[1]
137A	1,603	6,000	21,079	0	Yes
143	555	20,000	23,882	0	No
147	684	1,900	414	0	No
148	403	300	250	0	No
155C	510	1,000	17	0	No
157	350	2,200	0	0	No
158A	663	2,800	12	0	No
159	305	350	0	0	No
160	463	16,000	0	0	No
169A	607	1,300	7	0	No
180	362	2,000	35	0	No
182	383	3,000	7	0	No
196	413	5,000	397	0	No
198	113	1,000	7,048	0	No
199	12	100	1,661	0	No
200	52	300	425	0	No
201	287	4100	988	1,320	No
202	418	4,500	5,973	26,687	No
205	979	5,000	23,825	3,135	Yes
206	234	Minor	0	0	No
209	768	25,000	9,141	20,428	No
221	192	1,000	2,104	0	No
222	907	36,001	12,378	185,340	Yes
225[4]	110	24,000	9	0	No
226[4]	82		0	0	No
227B[4]	240		0	0	No
230[4]	896		24,834	30,730	Yes
231	162	400	12	0	No
232	182	150	248	0	No

Notes:

[1] Perennial Yield estimates taken from NDWR- Division of Water Planning.

[2] Data subject to change, current as December 2004. Pending duties are based on the total applications for appropriations yet to be developed and/or permitted.

[3] Perennial yield estimates for Basins 225 - 230 = 24,000 AFA combined based on NDWR (1992). State Engineer uses 24,000 AFA for Basin 230 for planning purposes (verbal communication, NDWR). See Section 4.1 for more information.

[4] Perennial yield estimate for Basins 225 - 230 = 24,000 AFA combined based on NDWR (1992). State Engineer uses 24,000 AFA for Basin 230 for planning purposes (verbal communication, NDWR). See Section 4.1 for more information.

5.0 Water Resource Planning Strategies

5.1 Overview of Water Resources Strategies

For planning purposes, DOE has estimated that a total of 6,400 acre-feet (approximately 2.1 billion-gallons) of water would be required for earthwork compaction, dust control, ballast production, and potable water supply during construction of the CRC rail line. This estimate was based on *Nevada Rail Partners, Construction Plan – Caliente Rail Corridor* (June 27, 2005).

Three (3) general options are described for obtaining water resources in support of rail construction activities, which include the following:

1. Obtain new, temporary appropriations using wells installed along the corridor within hydrographic basins while minimizing potential impacts to existing users in these areas.

2. Lease temporary water rights from existing permitees along the rail corridor.

3. Transport water by truck with water being obtained from permitted sources.

5.2 Development Approach

5.2.1 New Appropriations

The following Sections provide an overview of the recommended approach for obtaining new appropriations to support construction activities along the CRC.

The approach also includes a discussion on options that may exist for the potential temporary transfer of water from existing water permits to support the project.

5.2.1.1 Basin Status

Based on Nevada Water Law as defined in NRS 534.120, applications for new appropriations to support temporary construction activities would likely stand a better chance of approval from the State Engineer if they are made in basins that have not been designated and the temporary use does impact existing permitted users in the area. However, it should be noted that Designated basins are not considered "closed" to additional appropriations, just that additional restrictions and preferred uses of the water may be imposed as explained in Section 3 of this report.

5.2.1.2 Availability of Water (Perennial Yield)

In determining the quantity of water that can be appropriated from a groundwater basin, the State Engineer has historically looked to the perennial yield of that basin. The perennial yield is the amount of usable water from a groundwater aquifer that can be economically withdrawn and consumed each year for an indefinite period of time. It cannot exceed the natural recharge to that aquifer and ultimately is limited to maximum amount of discharge that can be utilized for beneficial use.

5.2.2 Existing Appropriations

Established water rights can be temporarily moved to an existing or new point of diversion. The point of diversion for underground water rights is usually a well. New wells may be constructed as points of diversion for temporary underground water appropriations. The wells must be properly abandoned at the end of the period specified on the temporary change permit.

Existing wells may also be used for temporary appropriations if the physical condition of the well meets project-specific requirements. A temporary change could be made to an existing well in another location or the change could be made in manner of use only at the location, or point of diversion already designated on the permit. Existing wells that do not meet project-specific requirements can be replaced to accommodate the temporary change. If new or replacement wells are drilled ownership of the well would be maintained by the existing well owner prior to it's replacement, or as designated on the existing water rights permit at the completion of the project.

Water rights can be sold or leased as part of a permit change. If leased, ownership of the permitted water right is retained by the owner designated on the permit during a temporary change. If an existing permit holder agrees to sell the water right, the permit would likely be forfeited or abandoned at the end of a temporary project unless the water right is sold again in accordance with another permit change. Refer to Section 3 of this report for additional information regarding changes to existing appropriations.

5.2.2.1 Municipal Sources

The sources that may represent the best potential for use of existing water appropriations may be unused portions of existing rights. Depending on the location for the place-of-use and project-specific needs at or near the location for the desired point of diversion, unused appropriations from municipal, quasi-municipal, industrial, commercial and power may provide the ideal conditions for obtaining a temporary change permit for a portion of an existing water right. In some cases a municipality, for example, may have a place-of-use (as described on the permit) large enough to move water via a temporary conveyance or water haulers from an existing permitted source to another location within the same place-of-use designated on the permit. Note that a "place-of-use," as designated on a permit, could be city limits for a municipal water rights permit. Municipal purveyors would have what could be considered unused appropriations when, for example, their designated "will-serve" amount is more than the actual duty specified on the existing water rights permit.

5.2.2.2 Irrigation Sources

Just as with any application to change an existing water right permit, proposed changes to irrigation rights, whether temporary or permanent, have to include an explanation of where the existing source is located (at point of diversion), where that water is currently being used, and where the new source and use will be located. However, the following additional requirements generally apply to changes in irrigation permits:

1. If existing permit status is "certificated" (CER) or "decreed" (DEC), the applicant also has to show the location and portion, or amount, of land removed from irrigation during the proposed change.
2. If existing permit status is "permitted" (PER), it is implied that the Proof of Beneficial use has not been completed, which would indicate that the extent (amount of water) and location of irrigated land has not been fully established. In fact, it is common for permit holders to overestimate the amount of land in order to maximize the specified duty and/or diversion rate that is specified on the permit. However, because the certified amount ultimately depends upon that amount of water that can actually be put to beneficial use, a "permitted" irrigation right does not require a description of land being taken out of use during a temporary transfer.

5.2.3 Surface Water Appropriations

As described in Section 4.3, over 50% of the water rights included within the Study Corridor (also described in Appendix C) are surface water appropriations. Nevada Statutes do not provide explicit measures preventing surface water from being applied or transferred for temporary construction projects. However, surface water appropriations present unique challenges that may preclude them from the planning process, particularly where underground water is available. These challenges generally include, but may not be limited to the following:

1. Surface water appropriations are often seasonal and may not be physically available all year, particularly in areas where water is diverted from ephemeral streams and springs.

2. New surface water diversions are more likely to impact existing users, particularly downstream, which may include wildlife habitats and wetlands areas. Therefore, surface water appropriations generally fall under tighter regulatory scrutiny when applications for new or changed points-of-diversion or manners-of-use are made.

3. Many existing surface water appropriations are subject to Court Decrees, which can in many cases, prohibit changes in place and manner of use.

5.3 Water Resources Development Strategy

5.3.1 Decision Criteria

The following information is a description of decision criteria that is based on project requirements for anticipated water needs during construction of the CRC alignment. The objective of this decision analysis is to provide a planning tool during the decision-making process for obtaining water to support the project. The general approach used in the development of the decision analysis is described in the flow charts shown in Figures 5-1 thru 5-3. Included in Appendix D are detailed summaries that describe preferred alternatives for obtaining construction water for each of the CRC basins. Each table in Appendix D includes a presentation of potential scenarios and the corresponding results of subjecting each CRC basin to the various items described in flow charts (Figures 5-1 thru 5-3). This screening process considers the physical, geological, and infrastructure constraints for each basin.

In order to effectively apply the information collected during this water resources assessment and predict future events based on the anticipated hydrogeologic and regulatory frameworks within each basin, a decision analysis was developed. The general approach used in the development of the decision analysis is described within the flow charts shown in Figures 5-1 thru 5-3. The intent of this analysis was to provide a tool, which could be used to create a simple graphical model that could be easily understood and applied by an end user. The criteria described within the decision analysis (Figures 5-1 thru 5-3) takes as input a situation described by a set of properties, and outputs a yes/no decision. The questions that must be answered during this process progressed from the fundamental to more complicated and less predicable. Therefore, the final outcome of this decision analysis for each basin was considered to be the "most likely" scenario rather than an absolute decision.

Application of the resulting decision analysis to each of the 21 CRC basins generated a decision matrix. In some cases, multiple "most likely" outcomes are shown in the decision matrix for individual basins. With the overall intent "to do what appears to be the most viable option for the project" and/or not to eliminate potentially viable alternatives prematurely, multiple outcomes arose from various situations such as hydrogeologic and infrastructure limitations, where one outcome best suited a portion of the corridor within a basin and potentially another alternative for other portions. As a result, in some basin multiple outcomes were arrived at, which resulted from situations where competing viable options were available in a basin. However, it should be noted that many of the decisions within the matrix and potential development scenarios will likely be subject to outcomes of: 1) future negotiations for rights or land, 2) discretionary decisions to be made by the State Engineer, 3) future engineering and economic analyses, and 3) additional information that may be required in order to better evaluate hydrogeologic conditions in areas where necessary information may be currently unavailable.

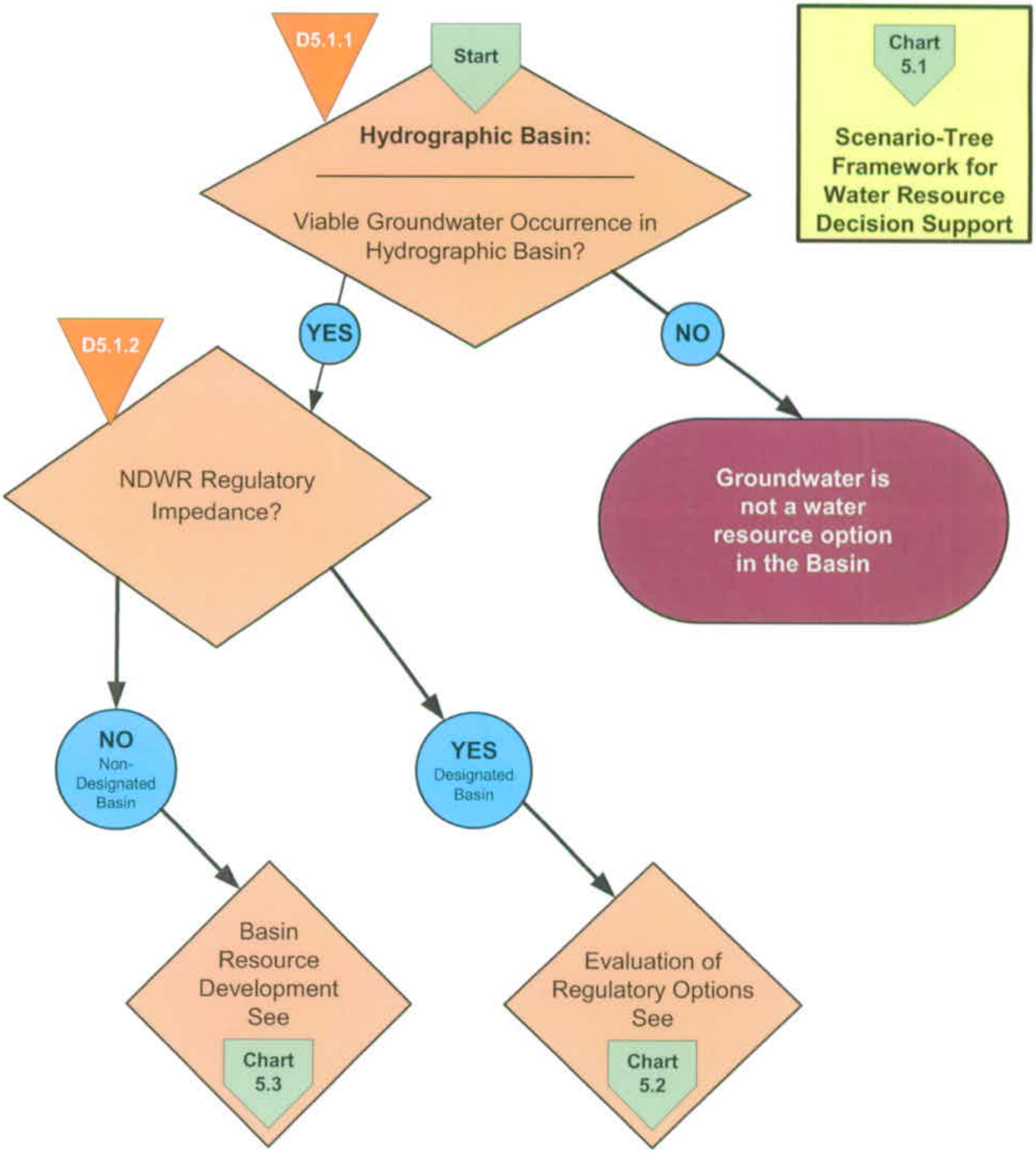

Figure 5-1. Decision Flow Chart (5.1)

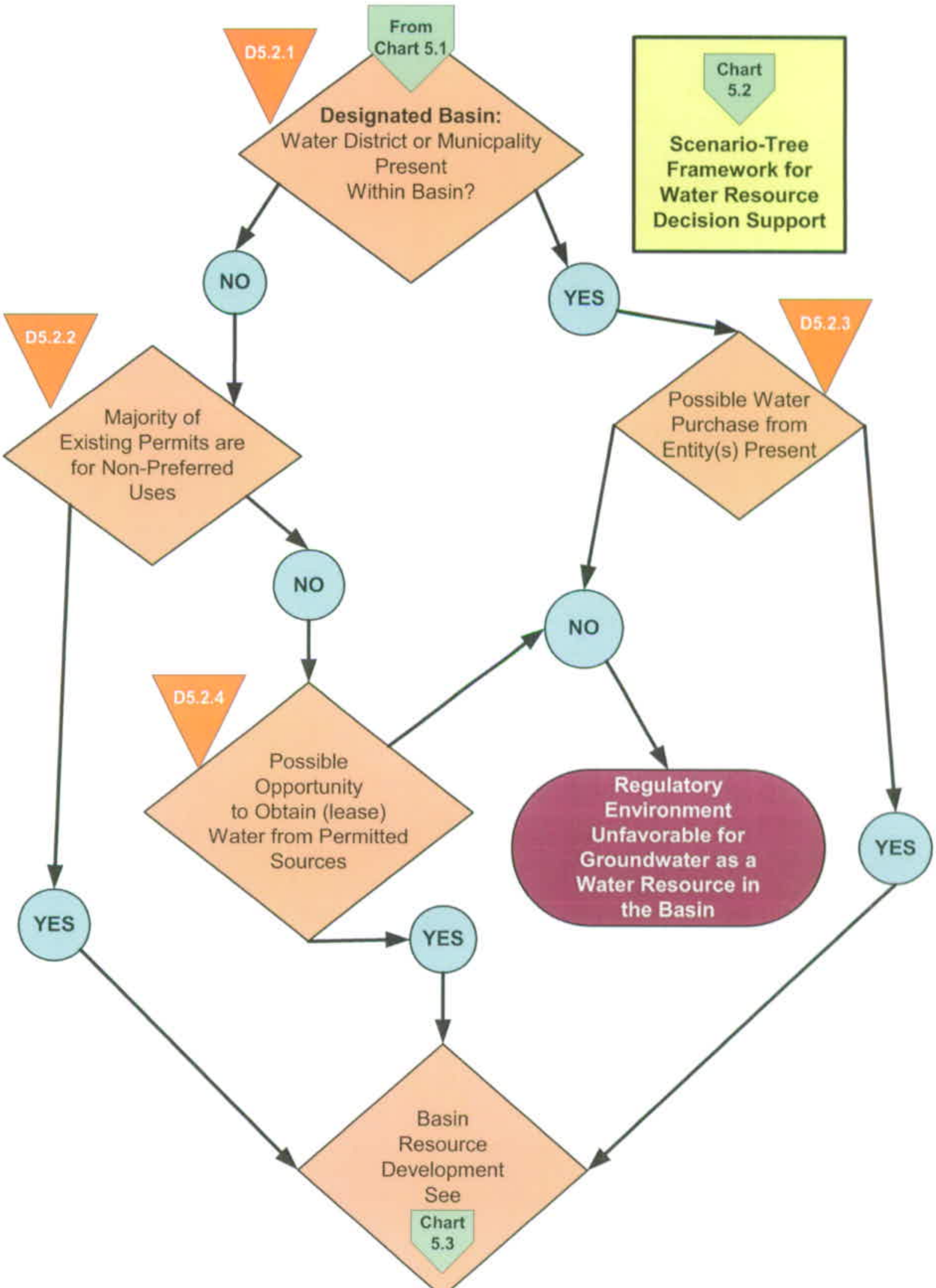

Figure 5-2. Decision Flow Chart (5.2)

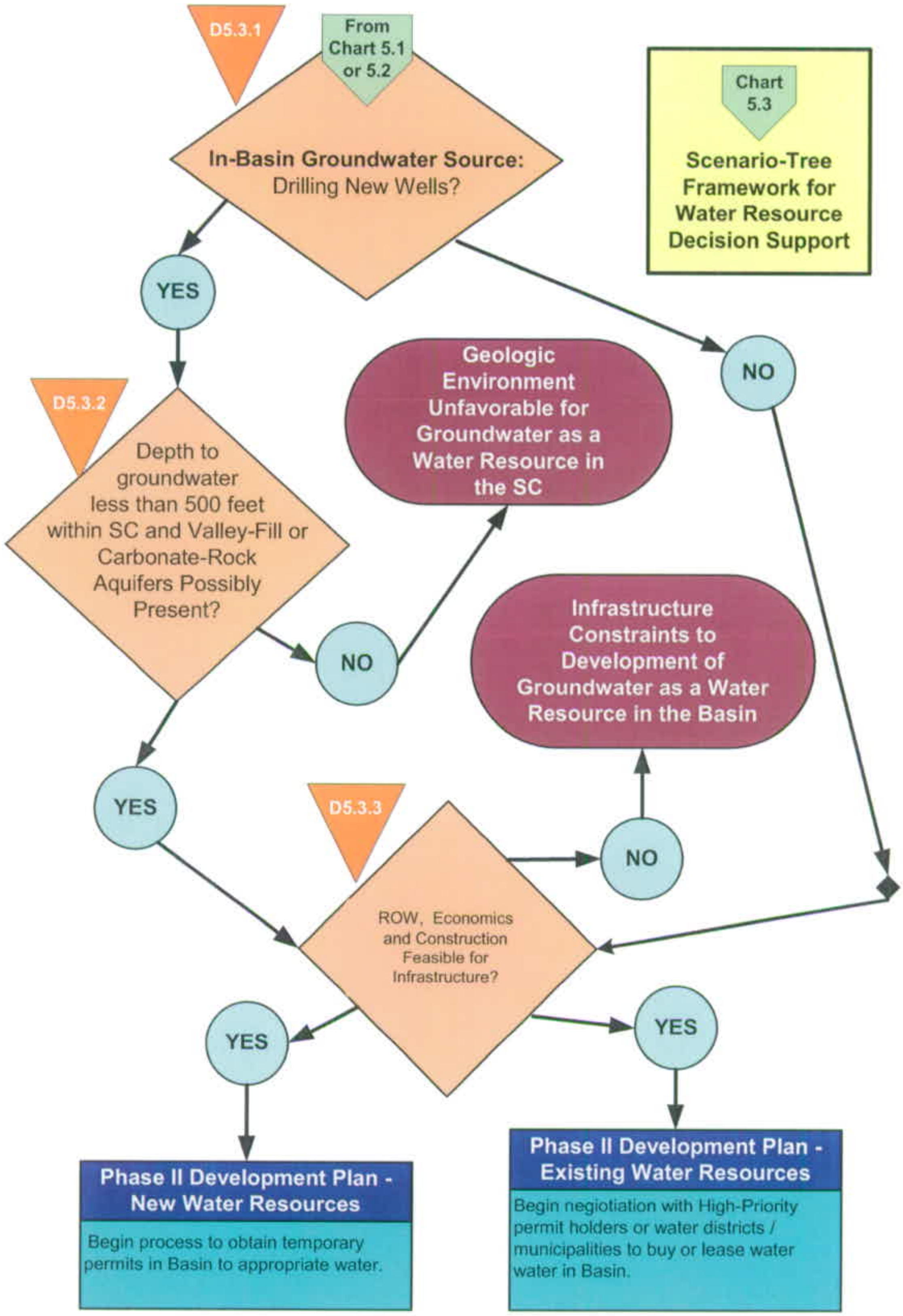

Figure 5-3. Decision Flow Chart (5.3)

Table 5.2 –Description of Scenario-Tree Decision Criteria

Chart	Decision	Question	Basis for Decision	Limitations
Chart 5.1	D5.1.1	Viable Groundwater Occurrence in Basin?	As long as there is a stated Perennial Yield for the Basin, we would view there is a viable groundwater occurrence.	Unlikely to change
	D5.1.2	Designated Status?	Based on the NDWR's current status.	Basins could be updated to Designated status
Chart 5.2	D5.2.1	Water District or Municipality Present?	Under Nevada water law, a water district or municipality can sell water without concern for its general use.	Identifying entities of interest
	D5.2.2	Majority of Permits for Non-Preferred Use?	A non-preferred use such as irrigation, could offer the possibility for temporary permits be issued for a preferred use such as building a railroad	State Engineer's Discretion
	D5.2.3	Purchase Water from Water District or Municipality?	Under Nevada water law, a water district or municipality can sell water without concern for its general use.	Likely to be infrastructure or resources constrained
	D5.2.4	Lease opportunity from Permitted Sources?	If there are existing permitted sources close to or within the Study Corridor than opportunities should exist.	Negotiation required
Chart 5.3	D5.3.1	Consider New Well Development?	Application for temporary permits should be considered.	Permit process may be impeded
	D5.3.2	Groundwater less than 500 feet in Alluvial or Carbonate Aquifer?	Most likely to yield groundwater at an economical depth.	May not yield favorable sites or might omit good sites
	D5.3.3	Infrastructure Feasibility?	Source distance from the Study Corridor	Routes may be hindered by land status

5.3.2 Decision Analysis

The following Sections provide a summary description of the basin-specific scenarios that resulted from application of the criteria described in the proceeding Section. This decision analysis incorporated the information gathered as part of the water resources assessment for this project and the resulting decision matrix as explained herein and described for each basin in Appendix D.

5.3.2.1 Fortymile Canyon, Jackass Flats (Basin 227A)

Forty-Mile Canyon, Jackass Flats is not a Designated basin, and generally has no existing appropriations that would be viable options for temporary utilization along the CRC. In addition, estimated depths to groundwater exceed 500 feet (bgs) near the CRC and throughout most of the basin. Reported well yields near the southern boundary (near Amargosa Desert) of the basin are generally on the order of 100-gpm or less.

The only potential options for temporary interbasin transfers would be from existing Industrial water rights totaling 61 AFA located in Crater Flat approximately 6 miles northwest of the CRC at the Fortymile Canyon boundary. There are also a few small quasi-municipal appropriations located less than 10 miles south of the CRC just outside of Fortymile Canyon in the Amargosa Desert basin. However, diversion of water from Amargosa Desert basin may be an unlikely scenario for providing temporary construction water in Forty-Mile Canyon (227A).

5.3.2.2 Crater Flat (Basin 229)

Crater Flat is not a Designated basin and has few existing appropriations that would be viable options for temporary construction water along the CRC. Groundwater throughout most of Crater Flat is very deep (more than 500 feet) and occurs in volcanic (and some carbonate) rocks that are not especially favorable for water development. Former Mining production wells near the north end of the corridor and an Industrial well in the central part of the basin near the CRC may be potential options for temporary construction water transfers. At the south end of the basin groundwater is shallower, less than 400 feet, and occurs in valley fill materials, which may present a better opportunity for development of new wells where reported yields of existing wells vary from 60 to 200-gpm.

Utilization of existing water rights may also be an option (although limited) within Crater Flat. Mining and Industrial appropriations within 5 miles of the CRC total approximately 972 AFA. Although potentially less favorable, another option for utilization of existing water rights may be from Amargosa Desert basin where there are large mining and milling water rights within 10 miles of the western edge of Crater Flat, or Oasis Valley Basin which has a few municipal water rights. However, haul and/or pipeline distances would be more than 20 miles for most of the CRC within Crater Flat if these potential interbasin transfer sources were to be used.

5.3.2.3 Oasis Valley (Basin 228)

Oasis Valley is a Designated basin with several large surface water appropriations within 5 miles of the CRC where estimated groundwater depths generally vary from 40 to 80 feet (bgs) along the entire length of the CRC in the basin. Groundwater depths appear to increase significantly east of the CRC in the volcanic rock formations where depths generally exceed 500 feet (bgs). Groundwater depths also become deeper in the consolidated rocks toward the western part of Oasis Valley where estimated depths to groundwater approach 400 feet (bgs) in some areas.

A potential concern in Oasis Valley may be the fact that much of the shallow groundwater in the basin is reported to have elevated fluoride levels, and in some areas may exceed Nevada drinking water standards. Although groundwater may be much deeper just north of Beatty (on the order of 400 to 500 feet), groundwater quality appears to be of higher quality just north of Beatty. Available information on existing wells near Beatty indicates that potential yields may vary from 80 to nearly 275-gpm.

A potential option for construction water in Oasis Valley may be the temporary utilization of municipal underground appropriations that total 540 AFA and are located approximately 6 to 8 miles west of the CRC in the southwestern corner of the basin. Another potential option for temporary utilization of existing water rights could be the nearly 426 AFA of mining and milling (surface) appropriations located approximately 5 miles west of the CRC in the Amargosa Desert basin. There are also 80 AFA of existing municipal (underground) and 103 AFA of existing dewatering (underground) water rights within 6 to 10 miles of the CRC in Amargosa Desert.

5.3.2.4 Sarcobatus Flat (Basin 146)

Sarcobatus Flat is a Designated basin where committed resources currently exceed perennial yield of 3,000 AFA by nearly 20%. Utilization of existing appropriations may be the most feasible option within this basin. There are over 2,400 AFA in existing water rights within 5 miles of the CRC, most which are designated as irrigation. Some of these appropriations are located within the proposed ROW for the CRC. There is also a quasi-municipal water right with a flow rate of 3-cfs located less than 2 miles from the CRC. Estimated depths to groundwater along the CRC vary from less than 40 to approximately 120 feet (bgs). Reported yields from existing wells near the CRC are as high as 1,000-gpm. Note that most of the area east of the CRC in Sarcobatus Flat falls within the NTTR boundary.

There may exist a potential option for a temporary interbasin transfer from Oasis Valley to the CRC near the southern boundary of Sarcobatus Flat. Within 2 miles of the ROW of the CRC in Oasis Valley there are over 1,400 AFA in surface water appropriations from springs that are used for irrigation purposes. This area is less than 6 miles at the CRC from the southern boundary of Sarcobatus Flat, which is shared with Oasis Valley.

5.3.2.5 Lida Valley (Basin 144)

Lida Valley is not a Designated basin but the reported perennial yield is only 350 AFA and is 65% appropriated based on the perennial yield. Construction of new wells near the CRC for temporary appropriations appears to be the most viable option within Lida Valley. Estimated groundwater levels may be nearly 300 feet (bgs) in the northeastern part of the basin near the CRC, but appear to be more shallow toward the southeastern basin boundary at around 160 feet (bgs). It appears that development of temporary appropriations with new wells could be a potential option to support CRC construction in Lida Valley. However, based on limited information from existing wells near the CRC, maximum production capacity may be less than 50-gpm.

The temporary transfer of water from near Goldfield in Alkali Spring Valley appears to be a feasible option to support construction of the CRC along one of the proposed alternative alignments that traverses the northeastern corner of Lida Valley. Near the town of Goldfield there are approximately 1,500 AFA of municipal rights that are less than 3 miles from the alternative alignment at the Alkali Spring boundary with Lida Valley. In addition, just north of Goldfield there are 200 AFA of mining and milling rights within 4 miles of the basin boundary at the CRC alternative.

There may also exist an option for consideration of a temporary interbasin transfer from an area in northern Sarcobatus Flat to Lida Valley. There are at least 210 AFA of appropriations (quasi-municipal and irrigation) that are less than 10 miles from the Lida Valley boundary (with Sarcobatus Flat) along the CRC (located within the proposed ROW).

Temporary utilization of existing water rights could also be an option within Lida Valley. Commercial and mining and milling appropriations exist within Lida Valley and total approximately 876 AFA, but are located approximately 18 miles west of the CRC along State Route 3.

5.3.2.6 Stonewall Flat (Basin 145)

Stonewall Flat is not a Designated basin but the reported perennial yield is only 100 AFA. There are few existing appropriations in this basin and they are all designated for stock water with limited annual duties. Little information is available on groundwater conditions, but production wells located in this basin are likely to produce low yields, particularly wells constructed in the volcanic rock formations. Based on limited available information, estimated depths to groundwater may exceed 200 feet (bgs) near the CRC. Also, it should be noted that almost the entire basin east of the CRC falls within the NTTR boundary.

If new temporary appropriations cannot be obtained for development of water resources from wells that yield sufficient quantity, an interbasin transfer from southern Alkali Spring Valley could be a potential option to support construction of the CRC along the CRC ROW within Stonewall Flat. Near the town of Goldfield there are approximately 1,500 AFA of municipal rights and approximately 200 AFA of mining and milling rights that are less than 8 miles from the ROW in the Stonewall Flat basin.

Another potential option, although less favorable, for a basin transfer could include a 237 AFA quasi-municipal water right in Cactus Flat, approximately 15 miles east of the CRC. However, any potential interbasin transfers of water from Cactus Flat would be at least 15 miles away and the infrastructure for delivery of water to the CRC from these areas would have to cross relatively rough terrain.

5.3.2.7 Alkali Spring Valley (Basin 142)

Alkali Spring Valley is not a Designated basin and is only 57% appropriated based on a perennial yield of 3,000 AFA. Estimated groundwater levels near Goldfield are generally less than 80 feet (bgs) in the area through which an alternative alignment of the CRC passes. However, it should be noted that reported water quality in the consolidated formations northwest of Goldfield are reported to have elevated TDS concentrations. Estimated depths to groundwater apparently increase to near 200 feet (bgs) between Goldfield and approximately 10 miles to the north along US Route 95. Although little information is available on groundwater conditions east of Goldfield toward the NTTR boundary, this basin could be considered for temporary appropriations from new wells.

Temporary utilization of existing water rights may also be an option within Alkali Spring Valley. Municipal and quasi-municipal appropriations within 5 miles of the CRC total approximately 775 AFA. Although potentially less favorable, another option for utilization of existing water rights may be from Clayton Valley (west of the CRC and Goldfield), where there are several large mining and milling water rights. However, most of these are between 11 and 20 miles west of the CRC and the required infrastructure to deliver water to the CRC would have to cross over relatively rough terrain.

5.3.2.8 Ralston Valley (Basin 141)

Ralston Valley is a Designated basin, although committed resources are reported to be significantly less than the perennial yield (6,000 AFA) of the basin. Ralston Valley has few high priority water rights near the CRC. In fact, there are no existing water rights within 5 miles of the CRC. Throughout most of the area in which the CRC passes, estimated depth to groundwater may vary from 140 feet to more than 200 feet (bgs). Although no information is available on groundwater conditions near the southern boundary of Ralston Valley, groundwater appears to be less than 100 feet (bgs) near Goldfield in the adjacent basin (Alkali Spring Valley) to the west near the CRC. Note that the southern portion of Ralston Valley basin falls within the NTTR.

Temporary utilization of municipal and industrial water resources may be an option in Ralston Valley based on existing water rights with combined annual duties of over 1,000 AFA. However, these existing appropriations, which are generally located northeast of Tonopah in Ralston Valley, may be prohibitively far (12 to 17 miles) from the CRC for consideration. Due to the lack of available existing water rights near the CRC, development of new wells supported by new temporary appropriations may be the most feasible option for water resource requirements in Ralston Valley. In addition, temporary transfers of appropriations may provide an opportunity to divert existing rights to preferred locations (within the basin) along CRC alignments using new wells constructed along the CRC.

If new temporary appropriations cannot be utilized in Ralston Valley, another potential option could be interbasin transfers near the CRC ROW from Alkali Spring Valley to the west and Stone Cabin Valley to the east. Approximately 12 miles north of Goldfield (in Alkali Spring Valley) and less than 6 miles west of the ROW (in Ralston Valley), there are approximately 400 AFA of municipal and quasi-municipal appropriations near US 95.

Another potential option could be a temporary interbasin transfer of existing quasi-municipal underground water rights from Stone Cabin Valley, which are located less than 7 miles from where the CRC enters Ralston Valley from the east. These water rights account for approximately 900 AFA. The haul and/or pipeline distance to the CRC (in Ralston Valley) would generally be less from these sources in Stone Cabin Valley, compared to existing sources in Ralston Valley. Note that at least one existing interbasin transfer has been permitted in this basin, where groundwater that originates in Ralston Valley is transferred to a different receiving basin (Big Smokey Valley) as part of Tonopah's municipal water supply.

5.3.2.9 Stone Cabin Valley (Basin 149)

Stone Cabin Valley is a Designated basin where committed resources currently exceed perennial yield (2,000 AFA) by nearly 4.5 times with another 5,100 AFA in pending annual duties (all irrigation applications). Utilization of existing appropriations may be the most feasible option within Stone Cabin Valley. There are over 900 AFA of existing quasi-municipal water rights that are less than 3 miles from the CRC (in some cases within the ROW) in the western part of the basin. There are also over 4,500 AFA of irrigation appropriations that lie within 4 miles of the CRC in the eastern part of the basin. Estimated groundwater depths are generally on the order of 100 feet (bgs) along most of the CRC within Stone Cabin Valley.

Options for temporary interbasin transfers would likely be limited to Hot Creek basin. However, there are very few existing appropriations in Hot Creek, most of which are small surface water rights.

5.3.2.10 Hot Creek (Basin 156)

Hot Creek is not a Designated basin but is 77% appropriated based on a perennial yield of 5,500 AFA. There are also 11,200 AFA in pending annual duties for this basin, all of which are irrigation applications. Estimated depths to groundwater vary from approximately 80 to 300 feet along both branches of the CRC — the northern alternative alignment (northern alignment) and the southern alternative alignment (southern alignment) of the CRC. The most viable option for temporary appropriations in Hot Creek to support construction of the CRC may be to obtain water rights for new wells. Based on existing information, the area near the northern alignment of the CRC may be better suited for installation of new wells. Reported yields for wells in this area vary from 20 to 250-gpm, while only a few small underground appropriations and limited well information exists near the main southern alignment of the CRC. This may be an indication of unfavorable conditions for new wells.

However, there are several existing surface water appropriations from spring diversions near the proposed southern CRC alignment.

Although limited, the only potential options for utilization of temporary interbasin transfers of water to support construction of the CRC in Hot Creek would be from Stone Cabin Valley to the west and Railroad Valley (North) to the east. In Stone Cabin Valley there are over 4,500 AFA in irrigation rights located approximately 10 miles southwest of where the CRC enters Stone Cabin Valley from Hot Creek. The only other potential location for an interbasin transfer, although not as favorable, could come from a 10,000 AFS (acre-feet seasonal) appropriation located in Railroad Valley (North), approximately 4 miles east of where the CRC enters Hot Creek. Although the annual duty is relatively large, these particular types of appropriations are generally restricted to seasonal use.

Options for temporary utilization of existing water rights are limited in Hot Creek as most of the existing appropriations are for stock water. However, near the southern alignment of the CRC there is an existing irrigation surface water right with 145 AFA located less than 4 miles from the CRC. There are also over 1,700 AFA from existing irrigation water rights located approximately 8 miles north of the northern alignment of the CRC.

5.3.2.11 Railroad Valley, South (Basin 173A)

Railroad Valley (South) is not a Designated basin, but appropriations exceed perennial yield (2,800 AFA) by nearly 40%. The depth and availability of groundwater differ significantly along the northern and southern alternative alignments of the CRC. Near the main southern alignment of the CRC groundwater depths may be more than 300 feet (bgs) in some areas based on data from only 2 wells. Near the northern alignment of the CRC, groundwater depths range from 60 feet where the corridor enters the basin on the north, to more than 200 feet (bgs) at the southeastern end of the basin. Many high yield irrigation wells with existing appropriations totaling 2,686 AFA lie within 5 miles of the northern alignment of the CRC, whereas only one existing water right of 22 AFA is located close to the southern alignment of the CRC.

Installation of new wells could be the best alternative for water on the southern CRC alignment, whereas temporary use of existing water rights would be the preferred option for the alternative alignment of the CRC. It should be noted that groundwater from wells along the northern alignment of the CRC alignments has been reported to have levels of fluoride (8 to 12 mg/l) in some areas that exceed Nevada Safe Drinking Water Standards.

5.3.2.12 Railroad Valley, North (Basin 173B)

Railroad Valley (North) is not a Designated basin and is 36% appropriated (based on a perennial yield of 75,000 AFA). However, there are currently over 106,000 AFA of pending irrigation duties and approximately 96,000 AFA of pending municipal duties in this basin. Only 5.5 miles of the northern alternative alignment of the CRC lies within Railroad Valley (North). Groundwater along this short segment of the northern alternative alignment of the CRC basin is approximately 200 feet (bgs).

The utilization of temporary appropriations from new wells appears to be the most feasible option for obtaining construction water in Railroad Valley (North) basin. Leasing of existing rights could also provide part of the required demand if needed. Existing water rights, which account for nearly 100 AFA of stock water permits (surface and underground) are located within 5 miles of the northern alternative alignment of the CRC.

Another potential option for temporary use of existing appropriations may be through an interbasin transfer of water from high yield irrigation wells with appropriations of nearly 2,700 AFA located in the northern part of the alternative alignment of the CRC route in the adjacent Railroad Valley (South) basin. Haul and/or pipeline distance for this option would be in the 6 to 12 mile range. However, groundwater in this area is reported to have high levels of fluoride (8 to 12 mg/l) near the northern alternative alignment of the CRC route in Railroad Valley (South) basin, which exceeds Nevada Safe Drinking Water Standards.

5.3.2.13 Penoyer Valley (Basin 170)

Penoyer Valley is a Designated basin where appropriations exceed perennial yield of 4,000 AFA by a factor of nearly 3.6 times. There are also 3,800 AFA of irrigation and commercial appropriations pending in this basin. Groundwater depths along the CRC range from 180 to more than 300 feet (bgs) with the shallowest areas toward the eastern portion of the basin. Groundwater conditions are poorly understood near the CRC and based primarily upon one well nearly 5 miles away from the CRC and downgradient into the valley having a water depth of 287 feet (bgs). It is likely that groundwater along the corridor will be deeper than 287 feet (bgs) based on the locations of existing wells (from which no water level data was reported) and the topography of the area near the CRC. Installation of new temporary wells along the CRC appears to be the most feasible option for obtaining construction water in Penoyer Valley.

Quasi-municipal wells with water rights totaling 3,600 AFA and several irrigation wells with total duties of nearly 4,500 AFA are located between 11 and 20 miles south of the CRC and could provide opportunities to temporary transfer of existing water. In this Designated basin, committed resources are greater than the perennial yield but many of the existing appropriations and wells are non-preferred use so temporary transfers from existing appropriations in the basin may be a viable option. In addition, temporary transfers of appropriations may provide an opportunity to divert existing rights to preferred locations (within the basin) along CRC alignments using new wells constructed along the CRC. Note, however, that changes to irrigation rights typically require the removal of land from production.

5.3.2.14 Garden Valley (Basin 172)

Garden Valley is not a Designated basin and is less than 8% appropriated based on a perennial yield of 6,000 AFA, but there are 11,584 AFA of municipal appropriations pending in this basin. Groundwater depths along the CRC vary from more than 300 feet (bgs) near the north end of the Worthington Mountains to approximately 120 (bgs) feet where the CRC crosses the Golden Gate Range. Near the southern alternative alignment of the CRC, groundwater is very deep, generally 400 to 500 feet (bgs) except for the southern most area where the CRC passes through the water gap in the Golden Gate Range. In this area groundwater depth is approximately 120 feet (bgs). Depths to groundwater are shallow near the north-central part of Garden Valley approximately 5 miles from the northernmost alternative alignment of the CRC. Here, depths to groundwater are generally less than 100 ft (bgs).

It appears that temporary appropriations from new wells may be the most viable option for construction water in Garden Valley. Reported yields from existing wells within the ROW of the CRC vary from 27 to 215-gpm.

Within 5 miles of the CRC (in Garden Valley) there are approximately 107 AFA of stock and 88 AFA (within ROW) of irrigation water appropriations. There are also 327 AFS of irrigation rights within 5 miles of the CRC but these have seasonal restrictions. Based on locations and terrain constraints, there appears to be little opportunity for consideration of temporary interbasin transfers of existing appropriations into Garden Valley from adjacent basins.

5.3.2.15 Coal Valley (Basin 171)

Coal Valley is not a Designated basin and is less than 1% appropriated based on a perennial yield of 6,000 AFA. Groundwater depths along the CRC are generally poorly understood in Coal Valley. Where the CRC enters the basin on the west, groundwater depth is approximately 300 feet (bgs). Depth to groundwater in the vicinity of the alternative CRC alignment is estimated to be approximately 100 feet (bgs) near the south alternative segment to more than 300 feet (bgs) near the Whiter River Valley border.

Although information on groundwater conditions is limited, temporary appropriations for new wells may be the preferred option for water resources in Coal Valley. Little information is available on existing well yields in this basin. However, one well near the western boundary of the basin along the southern alternative alignment of the CRC was reportedly tested at 350-gpm.

There generally appears to be limited opportunities for temporary transfers of existing appropriations, and limited options for an interbasin transfers from adjacent basins for use in Coal Valley. There are over 2,700 AFA of irrigation water rights located in southern White River Valley, but depending on the alternative route selected for the CRC, these may be over 10 miles away from the CRC.

5.3.2.16 White River Valley (Basin 207)

White River Valley is not a Designated basin and is approximately 80% appropriated based on a perennial yield of 37,000. There are also over 93,000 AFA in pending duties for this basin, most of which are for irrigation water. Groundwater along the CRC is estimated to be approximately 200 feet (bgs) in valley fill materials.

There may be possible opportunities for new appropriations from wells constructed in the southern part of the White River Valley near the CRC, but little information is known about yields from existing wells. A few wells within 5 miles of the CRC did report yields from 50 to 100-gpm, however based on the number of relatively large irrigation appropriations in this area, new wells may likely produce significantly more than 100-gpm. Several large irrigation water rights that total over 2,700 AFA lie within 5 miles of the CRC in southern White River Valley, which may present options for temporary transfers for construction purposes near the CRC.

5.3.2.17 Pahroc Valley (Basin 208)

Pahroc Valley is not a Designated basin and is less than 1% appropriated based on a perennial yield of 21,000 AFA. Groundwater levels along the CRC range from approximately 200 feet (bgs) where the CRC enters the basin on the northwest to more than 500 feet (bgs) where the CRC exits the basin in the southeast.

Existing appropriations in Pahroc Valley are all small stock water permits, although one particular well is documented as having been tested (during initial construction) at 400 gpm. Based on permit information in the area, this well was apparently installed to provide stock water. It is located within 2.5 miles of the CRC ROW. Groundwater is relatively deep in this valley so any spring sources are likely to be from unreliable perched zones. Installing new wells appears to be the preferred option for Pahroc Valley basin. Groundwater depths are estimated to be on the order of 200 to 400 feet (bgs) near the southeastern part of the CRC within this basin, and groundwater development from the valley fill alluvium would likely be unfavorable (low yields).

However, potentially favorable conditions may exist for groundwater production from the Paleozoic carbonate aquifer near the center of Pahroc Valley just east and west of where the proposed CRC ROW crosses State Highway 318. As shown in Plate 4-12, carbonate rocks are the dominant geologic feature on either side of the proposed common segment of CRC as it traverses through the central portion of the basin. Groundwater flow through the carbonate rocks in this portion of the Pahroc Valley is likely part of a larger regional flow system, where groundwater primarily flows through fractured consolidated rocks. As a result, carbonate aquifer properties are highly variable, but can produce significant quantities of water where favorable geologic conditions are more prominent.

An option for utilization of existing water rights via an interbasin transfer may exist from White River Valley, which borders Pahroc Valley to the northwest. In southern White River Valley, there are several large irrigation appropriations that are over 2,700 AFA within 5 miles of the CRC. These existing water rights may represent potential opportunities for supplying water to the northwestern part of the CRC within Pahroc Valley basin.

5.3.2.18 Dry Lake Valley (Basin 181)

Dry Lake Valley is not a Designated basin and is only 2% appropriated based on a perennial yield of 2,500 AFA. However, there are over 11,500 AFA in pending municipal appropriations. Well data is sparse in this basin (only 3 wells near the CRC) and groundwater depths near the CRC are generally more than 300 feet. The groundwater level in two of the wells near the CRC has been measured at nearly 400 feet (bgs). The third well has shallow water levels on the order of 40 feet (bgs), which likely produces from a shallow perched water zone that most likely could not be relied upon for large volumes of production water. Overall there appears to be limited opportunity to develop groundwater from new wells, as potential well yields could be relatively low. Although a few springs and shallow wells occur in the valley, these are likely producing from perched water zones. In 1980 two 1,000-ft test wells were installed approximately 8 miles south of the CRC in Dry Lake Valley (NDWR, 2005) that intersected water below 600 feet. These were both tested and yielded approximately 500-gpm. Other wells in the basin are generally reported to be low yield (less than 60 gpm).

Eakin (1963) states, "*The unconsolidated sand and gravel of the valley fill in Dry Lake and Delamar Valleys is capable of transmitting groundwater freely. However, most of the valley fill is probably composed of deposits of fine sand and silt. Grains of this size generally have relatively low permeability and, where saturated, transmit water much more slowly than coarse sand and gravel. Deposits of silty clay and clay may transmit water so slowly to wells that they will not yield supplies adequate for stock watering purposes.*" While it may be possible to install new wells in Dry Lake Valley along the CRC there is a high probability that they will be constructed deep and have low yields. As shown in Plate 4-12, Dry Lake Valley is situated within the Southern Nevada carbonate terrain and there may be an opportunity to tap the carbonate aquifer in the southeastern and eastern part of the basin near the CRC. Note however, that yields from the carbonate aquifer in Southern Nevada are highly variable, but in some areas can exceed 2,000 gpm.

Based on existing appropriations in Dry Lake Valley, utilization of existing water rights does not appear to be a feasible option within the basin. Appropriations within 5 miles of the CRC are for stock watering and are very small. If existing appropriations are required for construction water in this basin, this water will likely need to be obtained from the adjacent Panaca Valley or Pahroc Valley basins via temporary interbasin transfers.

Irrigation appropriations in Panaca Valley may offer a less than ideal source for an interbasin transfer into Dry Lake Valley for CRC construction. Haul and/or pipeline distances will be in the range of 7 to more than 20 miles and the required infrastructure to deliver water to the CRC would have to cross over relatively rough terrain. Obtaining water from Pahroc Valley would require the development of sufficiently productive new wells to supply the water since the only existing water rights are for small stock appropriations.

5.3.2.19 Panaca Valley (Basin 203)

Panaca Valley is a Designated basin where appropriations exceed the perennial yield of 9,000 by a factor of nearly 4. Groundwater throughout most of Panaca Valley near the CRC is shallow (estimated at less than 100 feet bgs) and occurs in valley fill. Some existing wells in this basin near the CRC have reported yields of over 1,000-gpm.

Temporary utilization of existing water rights would likely be the preferred option within Panaca Valley for temporary construction water. Municipal and quasi-municipal appropriations within 5 miles of the CRC exceed 2,500 AFA. These rights are generally concentrated near the central portion of the basin and as a result, pipeline and/or haul distances to common and alternative segments of the CRC near the western, southern and eastern boundaries of Panaca Valley would exceed 10 miles. Temporary transfers of irrigation appropriations may provide an opportunity to divert existing rights to preferred locations (within the basin) along CRC alignments. Note, however, that changes to irrigation rights typically require the removal of land from production.

Another option for utilization of existing water rights to support construction of the proposed southern alternative alignment may be from the adjacent Clover Valley basin where there are large municipal water rights within the ROW of the CRC. Along the western border of Panaca Valley a temporary interbasin transfer of water along the common segment of the CRC would likely have to come from new wells constructed in eastern Dry Lake Valley.

5.3.2.20 Escalante Desert (Basin 197)

Escalante Desert is not a Designated basin and existing appropriations are approximately 7% of perennial yield (1,000 AFA). Groundwater in the Escalante Desert near the CRC is shallow (estimated at 130 feet bgs based on only 2 wells) and occurs in valley fill alluvium. Obtaining new appropriations from wells in this basin appears to be the most viable alternative for providing CRC construction water.

There are few existing water rights in this basin that could be considered for temporary transfers. One existing 65 AFA mining and milling appropriation is located nearly 15 miles north of the CRC. In addition, due to potential infrastructure constraints temporary transfer of water from adjacent basins would not likely be a feasible option within Escalante Desert.

5.3.2.21 Clover Valley (Basin 204)

Clover Valley is not a Designated basin, but appropriations exceed perennial yield of 1,000 AFA by a factor of 5. Groundwater throughout most of Clover Valley near the CRC is shallow (estimated at less than 100 feet-bgs) and occurs in volcanic rocks and shallow alluvium. The installation of new wells in consolidated material is generally not recommended unless potentially productive zones created from fractured zones can be captured. Most of Clover Valley consists of volcanic rock and consolidated material. However, yields from existing wells completed in consolidated material and alluvial fill within the basin vary from 35 to 1,100-gpm.

As shown in Plate 4-15, a proposed alternative CRC alignment passes through the northwestern corner of Clover Valley near the border with the Lower Meadow Valley Wash near US 93 and 317. Near Caliente, temporary utilization of existing water rights may be a potential option within Clover Valley and Lower Meadow Valley Wash basins. There are nearly 6,000 AFA in municipal appropriations within 1-mile the CRC near the northwest corner of Clover Valley. There are also over 4,500 AFA of irrigation and nearly 2,000 AFA of decreed appropriations within 5 miles of the CRC located within Clover Valley and Meadow Valley Wash basins.

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Appendix A

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
141	U-564	141 S01 E45 02 1	37.87243308	-117.2414695	M	5250	40		247	0	12/29/63	12/29/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375248116541601
141	U-575	141 N01 E45 19 1 Ralston Valley Well	37.91493262	-117.33702904	M	5219	5		0	0	11/8/00	6/16/04	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375533116580601
141	U-580	141 N03 E44 35DDD 1	38.02021421	-116.66339332	T	5370	10		0	0	11/9/56	8/15/02	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380353117000201
141	U-585	141 N03 E44 16C 1	38.10437913	-116.31866349	M	5500	1		540	0	5/18/47	5/18/47	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380639117030501
141	U-596	141 N03 E44 06BAB 1 USGS-MX	38.11437914	-116.33671951	S	5579	1		186	0	1/1/81	5/17/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380858117050701
141	U-599	141 N04 E44 19AA 1 Tonopah Water Co	38.17298886	-116.25894085	F	5800	1		55	0	5/12/48	5/12/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381132117044001
141	U-601	141 N04 E44 18DDCC1 Tonopah Water Co 1	38.1932671	-116.33727582	M	5660	10		315	1	8/15/67	8/15/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381138117042501
141	U-602	141 N04 E44 15CB 1 USGS-MX	38.19465585	-117.07952236	F	5940	20		141	0	3/1/81	3/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381201117020401
141	U-607	141 N04 E44 17BCB 2 Tonopah Water Co	38.20660186	-116.57672552	T	5700	10		145	0	5/17/84	5/17/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381241117041702
141	U-608	141 N04 E44 08CC 1 Tonopah Water Co	38.21132249	-117.07230003	F	5800	1		38	0	5/12/48	5/12/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381242117041601
141	U-609	141 N04 E44 18ADAA1 Tonopah Water Co 6	38.21160027	-117.07202224	M	5700	10		150	1	5/17/84	5/17/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381242117041602
141	U-648	141 N05 E44 07B 1	38.30377921	-116.58461895	H	5900	1		0	0	6/16/62	6/16/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381822117051601
141	U-1704	141 N02 E43 01ACB 1	38.06493398	-117.10368844	U	0	0		0	2			0	

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
142	U-527	142 S03 E42 11B 1 City of Goldfield	37.60076861	-116.95423586	M	5800	1		440	0	3/6/65	1/18/67	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374209117135101
142	U-528	142 S03 E42 10A 1 City of Goldfield	37.69632167	-117.23702293	M	5900	1		440	0	3/6/65	1/18/67	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374209117141501
142	U-530	142 S03 E42 02C 1 City of Goldfield	37.69576607	-117.24202308	M	5710	1		45	0	1/18/67	1/18/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374243117135101
142	U-533	142 S02 E42 26CAA 1	37.70576615	-117.23702307	M	5540	5		0	0	4/2/84	4/2/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374401117140501
142	U-547	142 S01 E41 31AC 1 USGS-MX	37.73354402	-117.23563452	F	4960	10		200	0	1/1/81	1/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374818117250701
142	U-552	142 S01 E41 22ABA 1 USGS-MX	37.84138675	-116.20960018	S	4870	5		150	0	1/1/81	11/19/91	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375041117212401
142	U-556	142 S01 E41 18ACDB1 USGS	37.84859578	-116.76811581	5	4805	5		73	0	1/19/67	4/2/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375115117244201
142	U-557	142 S01 E41 16BBA 1 USGS	37.85409886	-117.41258675	F	4805	5		73	0	4/2/84	4/2/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375131117230301
142	U-559	142 S01 E41 18A 1 Well (Report R45)	37.86117349	-116.76719633	5	4825	1		72	0	1/19/67	1/19/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375147117241401
142	U-560	142 S01 E41 08ADBD1 USGS	37.85548775	-117.4117534	M	4805	5		46	0	1/19/67	4/2/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375211117232501
142	U-561	142 S01 E42 10ABAC1	37.86965453	-117.39119724	F	4960	20		400	0	10/20/92	10/20/92	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375224117145401
142	U-562	142 S01 E41 05CB 1 USGS-MX	37.87326636	-117.24924757	S	4922	80		201	0	1/1/81	11/19/91	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375244117235801
142	U-563	142 S01 E42 10A 1	37.87326558	-117.40425331	T	4990	1		310	0	5/29/50	5/29/50	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375247117140501
142	U-565	142 S01 E41 04C 1 Well (Report R45)	37.87993593	-116.90534608	T	4825	1		72	0	1/19/67	1/19/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375255117222101
142	U-566	142 S01 E42 10AAA 1	37.87493236	-117.38119692	M	4960	10		443	0	2/1/60	3/28/91	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375300117150001
142	U-567	142 S01 E42 10AAAD2 Goldfield	37.87298862	-117.24452517	F	4970	20		400	0	9/14/69	4/10/96	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375300117150002
142	U-571	142 N01 E42 34C 1	37.88644531	-116.79129446	5	4940	1		160	0	10/22/13	1/19/67	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375401117150801
142	U-574	142 N01 E41 26A 1	37.91483992	-116.75243459	5	5000	1		0	0	10/21/13	10/21/13	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375519117194001
142	U-576	142 N01 E42 18AD 1 USGS-MX	37.92568526	-116.96929316	S	5020	10		200	0	1/1/81	1/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375626117175901

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
144	U-505	144 S04 E43 33AAA 1	37.31520934	-117.05090411	F	4749	5		0	0	1/18/67	4/3/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=372138117274001
144	U-510	144 S06 E43 05CAD 2	37.36048667	-117.46202348	F	4622	5		325	0	4/3/84	4/3/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=372632117130101
144	U-512	144 S06 E43 05CAD 1 USGS - Lida Valley Well	37.44215373	-117.21785243	F	4622	1		0	0	1/18/67	4/29/95	26	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=372700117110001
144	U-513	144 S05 E43 17CC 1	37.44337071	-117.18094618	1	4690	40		604	0	8/10/58	8/10/58	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373003117110101
144	U-514	144 S06 E43 20BBA 1	37.4977103	-117.18451906	T	4670	5		604	0	9/10/58	4/3/84	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373036117151201
144	U-518	144 S04 E43 33AAA 2 Ralston Well	37.54493758	-116.85450955	U	4756	5		409	0	4/20/90	6/17/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373320117090601
144	U-519	144 S05 E43 03 1	37.55537741	-117.15232449	5	4745	20		102	0	7/24/76	7/24/76	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373323117090801
144	U-520	144 S04 E43 33A 1 Ralston	37.53548852	-117.14229628	T	4780	1		0	0	1/18/67	1/18/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373338117085001

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
145	U-515	145 S05 E46 02 1 Hammel Mine Well	37.50993213	-117.254243	F	5540	2.5		123	0	4/21/90	6/15/04	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373228116472001
145	U-516	145 S05 E46 04 1 USAF NAF-76 Civet Cat Mine	37.5410503	-116.78978479	T	5282	0		225	0	4/21/90	4/21/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373231116494401
145	U-517	145 S04 E46 32 1 Civet Cat Cave Well	37.54188264	-116.82978635	U	5116	0		30	0	4/21/90	4/21/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373242116511301
145	U-522	145 S04 E45 08 1 Stone Wall Well	37.5543774	-117.15313006	M	4675	0		114	0	4/21/90	4/21/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373618116580001
145	U-526	145 S04 E45 17 1	37.60493501	-116.96756971	U	4690	1		0	0	1/1/07	1/1/07	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373623116565201

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
146	U-289	146 S09 E45 34C 1 USBLM	37.1074376	-116.92895488	M	4015	1		0	0	3/13/62	3/13/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370627116554101
146	U-290	146 S09 E45 34DBC 1 USBLM	37.10845434	-116.92321595	1	4012	10		65.6	0	3/13/62	10/19/99	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370631116551801
146	U-291	146 S09 E46 35A 1 BLM Springdale	37.11355094	-116.7931202	S	4035	10		117	0	1/1/52	9/29/04	36	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370648116473001
146	U-294	146 S09 E45 29B 1	37.1321584	-116.96367802	M	4050	1		19	0	3/13/62	3/13/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370739116574601
146	U-296	146 S09 E46 28BBCB1 NDOT TPJ-2	37.13139677	-116.84173501	5	4005	5		0	0	3/11/85	9/29/04	33	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370753116502701
146	U-302	146 S09 E46 20BADA1 USBLM TPJ-1	37.14484619	-116.8512243	5	3991	2		107	0	1/1/52	9/29/04	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370840116510101
146	U-318	146 S09 E46 18 1 USAF - Tolicha Pk Hand Dug	37.15965943	-116.86201085	U	4009	0		50	0	4/26/90	2/24/97	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370937116514001
146	U-356	146 S08 E43 26BC 1 BC- 1	37.21898915	-117.1311069	H	4002	10	120VLCC	410	0	4/8/02	9/29/04	12	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371309117074901
146	U-357	146 S08 E43 26BC 2 BC- 2	37.21899749	-117.1311069	H	4000.97	0.1	120VLCC	103	0	5/19/03	9/29/04	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371309117074902
146	U-367	146 S08 E43 23A 1	37.22715293	-117.12090414	M	3975	1		0	0	3/13/62	3/13/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371337117070201
146	U-369	146 S08 E43 24BB 1	37.22743071	-117.12034859	M	3975	1		0	0	2/8/62	2/8/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371339116433401
146	U-370	146 S08 E43 23BB 1	37.22662795	-117.12123747	T	3975	1		0	0	2/8/62	12/23/99	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371339117074501
146	U-372	146 S08 E43 32CAB 1	37.22816671	-117.1269959	T	3996	1		0	0	3/12/85	12/23/99	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371341117073401
146	U-403	146 S08 E44 12CD 1	37.23902013	-116.5610728	H	3985	1		250	0	9/17/59	2/8/62	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371450116594901
146	U-415	146 S08 E44 12 2	37.24773529	-116.50996322	H	4000	10		125	0	2/8/62	3/12/85	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371505116594101
146	U-420	146 S08 E44 12 1	37.25132056	-116.99562539	F	4000	10		0	0	3/12/85	3/12/85	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371517116594001
146	U-423	146 S08 E44 10AA 1	37.25402058	-116.99558373	1	4000	1		260	0	11/25/58	2/8/62	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371523117012601
146	U-424	146 S08 E44 08AA 1	37.25632019	-117.0247924	M	4000	1		600	0	7/1/60	7/1/60	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371523117033401
146	U-425	146 S08 E44 11BA 1	37.25993089	-117.06034838	M	4000	1		0	0	10/26/61	10/26/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371525117005301
146	U-426	146 S08 E44 10AB 1	37.25687587	-117.01562563	M	4000	1		0	0	2/8/62	2/8/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371527117013601
146	U-436	146 S08 E44 11BBC 1	37.26304964	-116.49161496	H	3975	5		138	0	9/17/59	3/12/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371547117011101
146	U-438	146 S08 E44 08AA 2	37.26298697	-117.02062571	F	4001	1		250	0	4/15/68	3/18/92	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371553117034302
146	U-440	146 S08 E44 10ABB 1	37.25604193	-117.06284839	S	3988	5		260	0	11/25/58	3/12/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371555117015001
146	U-444	146 S08 E44 06CBB 1 SF- 1	37.26520908	-117.03145918	F	4021	10	120VLCC	879	0	4/22/02	9/29/04	12	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371615117053601
146	U-445	146 S08 E44 06CBB 2 SF- 2	37.27076393	-117.09415718	H	4021	10	100VLFL	496	0	4/22/02	9/29/04	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371615117053602
146	U-456	146 S08 E44 02 2	37.27135526	-116.48933686	H	4008	5		203	0	3/15/68	3/12/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371646117010101
146	U-457	146 S08 E44 03BAAA1	37.27937605	-117.01784796	F	4010	10		100	1	3/29/86	3/29/86	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371647117015201
146	U-460	146 S07 E44 34CA 1	37.27965366	-117.03187592	S	4050	1		223	0	1/17/62	1/17/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371652117015201

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
146	U-463	146 S07 E44 34BB 1	37.28104256	-117.03201481	M	4050	1		270	0	6/6/58	2/8/62	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371712117020701
146	U-464	146 S07 E44 34CAB 1	37.28659812	-117.03618156	M	4025	10		223	0	1/17/62	3/12/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371713117020301
146	U-468	146 S07 E44 28CB 1	37.28687591	-117.03507043	F	4000	1		203	0	10/1/61	10/1/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371737117031401
146	U-477	146 S07 E44 28BC 1	37.29354241	-117.05479294	M	4000	1		100	0	10/1/61	10/1/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371752117031401
146	U-485	146 S07 E44 21CD 1	37.29770908	-117.05840412	M	4100	1		375	0	10/26/61	10/26/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371821117025801
146	U-495	146 S07 E44 21 1	37.30576477	-117.05368188	M	4105	5		375	0	10/26/61	3/12/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371855117030001

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
149	U-549	149 S01 E46 25D 1 USAF TTR EH-5	37.80493213	-117.41953092	M	5419	10		860	0	11/15/83	9/15/00	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374915116460401
149	U-553	149 S01 E46 13DD 1 TTR 3A WW	37.84465467	-117.35758461	F	5362	10		805	0	4/23/87	6/16/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375045116460201
149	U-554	149 S01 E46 13DA 1 TTR 3B WW	37.84592636	-116.76827416	5	5360	10		300	0	1/11/85	6/15/04	27	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375054116460201
149	U-555	149 S01 E46 13 1 TTR 3BB	37.84840412	-116.76819915	5	5358	10		0	0	4/20/90	6/16/04	27	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375055116460201
149	U-558	149 S01 E46 12D 1 TTR EH-6	37.85854344	-117.38508578	F	5355	10		535	0	11/17/83	6/16/04	30	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375139116460001
149	U-568	149 S01 E46 01BA 1 USAF TTR 1A WW	37.87354419	-117.24258066	F	5353	10		405	0	11/27/90	11/27/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375303116463101
149	U-569	149 S01 E46 02A 1 TTR EH-7	37.8841038	-116.77617443	F	5343	10		715	0	11/20/83	11/19/92	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375310116472301
149	U-570	149 S01 E46 02A 2 TTR EH-7 WW	37.8860481	-116.79061943	F	5343	10		660	0	9/1/89	6/16/04	28	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375310116472302
149	U-572	149 N01 E46 25CABA1 TTR Sandia 3	37.89271078	-117.25869256	M	5365.9	0.5		250	0	6/10/59	11/9/99	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375429116463201
149	U-573	149 N01 E47 30 1 TTR Reeds Ranch Well	37.90818143	-116.77621053	5	5384	10		127	0	4/19/90	6/16/04	26	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375453116450501
149	U-577	149 N01 E46 04AD 1 USGS-MX	37.9404884	-117.30063906	M	5400	20		201	0	3/1/81	3/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375808116491801
149	U-579	149 N02 E47 13DB 1 USGS-MX	37.97465886	-116.37866364	M	5578	80		189	0	1/1/81	11/5/91	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380113116394501
149	U-581	149 N03 E48 32BAAC1	38.06421667	-117.00227222	1	5573	20	110VLFL	141	0	5/1/52	8/15/02	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380400116380001
149	U-582	149 N03 E47 35D 1	38.07293889	-116.63163889	1	5400	1		0	0	11/9/56	11/9/56	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380407117002301
149	U-605	149 N04 E48 08CCBD1	38.20437723	-116.24088519	T	5795	10		65	1	4/17/91	4/17/91	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381227116381001
149	U-606	149 N04 E48 11CD 1 USGS-MX	38.20737958	-116.63706063	S	5709	80		154	0	1/1/81	11/5/91	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381232116344501
149	U-611	149 N04 E47 12BB 1 USGS-MX	38.21826691	-117.07230011	F	5906	80		194	0	9/1/80	11/5/91	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381310116401701
149	U-645	149 N05 E48 08CC 1 USGS-MX	38.29578324	-115.2397434	T	5906	80		200	0	9/1/80	11/5/91	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381754116380601
149	U-647	149 N05 E48 10 1 UCE- 2	38.30132232	-115.86781768	T	6202	10		1659	0	6/16/04	6/16/04	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381814116350101
149	U-1682	149 N01 E47 30ABB 1	37.91521491	-116.75311795	U	0	0		0	2			0	
149	U-1687	149 S02 E47 07AA 1	37.95549242	-116.75089559	U	0	0		0	2			0	
149	U-1696	149 N01 E47 02BAB 1	37.97160349	-116.6853382	U	0	0		0	2			0	
149	U-1708	149 N03 E46 10BD 1	38.12771309	-116.81201032	U	0	0		0	2			0	
149	U-1710	149 N03 E48 03AC 1	38.14715782	-116.5870032	U	0	0		0	2			0	

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
156	U-578	156 N02 E50 34C 1	37.96882514	-116.82256515	M	6350	1		0	0	10/17/65	10/17/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375829116230401
156	U-584	156 N03 E51 19C 1	38.06854719	-116.67922746	M	5450	1		320	0	1/1/64	1/1/64	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380616116192201
156	U-588	156 N03 E50 13CA 1 USGS-MX (Revielle Valley)	38.10743419	-117.0464644	M	5350	10		682	0	2/13/81	9/14/04	47	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380652116200901
156	U-589	156 N03 E50 13CA 2 USGS-MX	38.11437914	-116.33671951	S	5350	10		703	0	2/7/81	3/5/92	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380652116200902
156	U-590	156 N03 E50 13CA 3 USGS-MX	38.11437914	-116.33671951	S	5350	10		405	0	2/7/81	3/5/92	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380652116200903
156	U-598	156 N04 E51 29D 1	38.15548925	-116.15227081	M	5264	10		137	0	10/6/51	10/6/51	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381023116152901
156	U-600	156 N04 E50 22BC 1 USGS-MX	38.19215586	-117.07868896	M	5290	10		201	0	9/1/80	1/1/81	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381136116201101
156	U-604	156 N04 E51 16CA 1 USGS-MX	38.20021165	-117.03535386	M	5200	80		200	0	9/1/80	9/20/94	10	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381216116142401
156	U-613	156 N04 E50 09BD 1 USGS-MX	38.22132252	-117.06035518	M	5460	10		199	0	3/1/81	3/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381321116210201
156	U-616	156 N04 E51 03DD 1	38.22826692	-117.06368874	F	5142	20		300	0	10/5/59	10/5/59	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381345116124201
156	U-619	156 N04 E51 05 1	38.22937803	-117.0625776	F	5180	40		130	0	7/20/70	7/20/70	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381350116151601
156	U-621	156 N04 E52 06CC 1 USGS-MX	38.23660017	-117.07118917	F	5240	20		200	0	9/1/80	1/1/81	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381413116101401
156	U-623	156 N05 E55 33DD 1	38.24298905	-117.06896692	M	4830	3		396	0	8/19/65	3/15/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381440116124101
156	U-625	156 N05 E55 36DA 1	38.24604457	-117.07202265	F	4850	10		179	0	11/30/65	3/15/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381447116160501
156	U-626	156 N05 E55 34DD 1	38.24632126	-116.26894184	M	4850	10		395	0	10/1/65	3/15/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381448116134101
156	U-627	156 N05 E55 35BD 1	38.24659884	-116.22894082	M	4820	10		320	0	10/21/65	5/16/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381451116144101
156	U-628	156 N05 E55 36DA 2	38.24743215	-116.24560804	M	4850	10		105	0	6/2/51	5/16/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381453116161002
156	U-639	156 N05 E51 19B 1	38.28077053	-115.68392213	S	5220	1		0	0	10/17/65	10/17/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381651116170801
156	U-650	156 N05 E51 11C 1 Twin Springs	38.30800188	-115.37196857	M	5250	1		0	0	10/18/65	10/18/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381846116122901
156	U-653	156 N05 E50 01BD 1 USGS-MX	38.31271005	-116.2089406	M	5266	80		200	0	9/1/80	10/16/91	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381923116174501
156	U-659	156 N06 E50 10BB 1	38.3357713	-115.62919818	M	5640	20		260	0	2/14/75	2/14/75	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382021116235901
156	U-660	156 N06 E50 35A 2	38.39993322	-116.34144488	F	5327	1		205	0		4/13/90	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382022116183301
156	U-662	156 N06 E50 27AC 1 USGS-MX	38.35438097	-115.66281058	M	5580	10		505	0	10/3/80	2/4/95	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382109116194901
156	U-663	156 N06 E50 27AC 2 USGS-MX	38.3524331	-116.3311663	T	5580	10		455	0	10/3/80	10/3/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382109116194902
156	U-670	156 N06 E51 22BA 1 Blue Jay Maintenance Sta	38.36411366	-115.28002171	M	5238	5	111ALVF	238	3	12/13/94	6/16/04	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382205116132500
156	U-673	156 N06 E49 24AADA1	38.37465887	-115.64364327	M	7400	20		400	1	11/3/93	11/3/93	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382212116235101
156	U-676	156 N06 E50 17CD 1	38.37187824	-117.05757934	F	6170	20		216	0	7/20/48	7/20/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382223116222501
156	U-679	156 N06 E51 17BD 1 USGS-	38.37743461	-115.71642378	M	5315	80		188	0	9/1/80	9/20/94	16	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382255116153801

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
156	U-681	156 N06 E50 11B 1 Hot Creek	38.38187698	-116.26144271	T	5540	1		0	0	10/17/65	10/17/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382341116192801
156	U-715	156 N07 E51 10AD 1 USGS-MX (Hot Creek 1)	38.4818804	-115.5391949	S	5600	10		480	0	10/9/80	9/14/04	54	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382901116125201
156	U-716	156 N07 E51 10AD 2 USGS-MX	38.48354378	-116.21533079	T	5610	10		480	0	10/9/80	3/5/92	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382901116125202
156	U-722	156 N07 E51 04DC 1 USGS-MX	38.49298921	-115.67031141	M	5490	10		200	0	9/1/80	3/1/81	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382926116141501
156	U-1705	156 N03 E51 19BA 1	38.10410135	-116.31755236	U	0	0		0	3			0	
156	U-1718	156 N04 E51 13DA 2	38.20409953	-116.17727205	U	0	0		0	3			0	
156	U-1719	156 N04 E51 13DA 3	38.20409953	-116.17727205	U	0	0		0	2			0	
156	U-1723	156 N04 E51 12BA 1	38.22771026	-116.18421694	U	0	0		0	3			0	
156	U-1729	156 N05 E51 19BA 1	38.28326583	-116.27866454	U	0	0		0	2			0	
156	U-1733	156 N06 E50 25AB 1	38.34298846	-116.31061019	U	0	0		0	2			0	

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
170	U-1300	170 S04 E55 13BB 1	37.60439536	-115.74781159	M	4940	1		401	0	1/1/66	1/1/66	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373624115434101
170	U-1303	170 S04 E55 10DD 1	37.60772826	-115.76781206	M	4940	1		470	0	1/1/66	1/1/66	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373635115450101
170	U-1304	170 S04 E55 09BC 1 Well (Report R60)	37.62051075	-115.79717672	M	4940	1		232	0	10/7/71	9/21/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373704115465701
170	U-1305	170 S04 E55 07 1	37.6143936	-115.83836931	M	4880	1		240	0	1/1/65	1/1/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373704115490401
170	U-1306	170 S04 E55 08AA 1	37.61883842	-115.80697972	T	4910	10		250	0	2/27/66	10/22/02	63	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373708115482201
170	U-1308	170 S04 E55 03CC 2	37.62244978	-115.78447921	T	4858	10		400	0	9/3/66	10/2/97	56	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373721115470102
170	U-1309	170 S04 E55 04DC 1	37.620697	-115.78796817	1	4865	10		415	0	7/22/66	10/22/02	13	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373721115473401
170	U-1310	170 S04 E55 05DC 1	37.62244935	-115.81170208	T	4890	10		256	0	10/28/65	4/11/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373721115483901
170	U-1311	170 S04 E55 02CD 1 Well (Report R60)	37.62380837	-115.76551211	M	4897	1		0	0	11/20/69	9/21/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373729115442601
170	U-1312	170 S04 E55 03CC 1	37.62244983	-115.78142359	M	4897	1		208	0	1/1/65	1/1/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373729115454301
170	U-1314	170 S03 E55 04CBAB1 Sundown Well	37.6277271	-115.80364637	S	4850	10		170	0	8/4/65	3/18/97	55	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373740115481001
170	U-1315	170 S04 E55 05 1	37.6260602	-115.82142455	M	4880	1		250	0	1/1/66	1/1/66	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373741115480601
170	U-1320	170 S03 E55 34CC 1	37.63439388	-115.78392372	M	4870	1		537	0	1/1/66	10/22/02	64	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373813115454001
170	U-1321	170 S03 E55 35DD 1	37.63661658	-115.74920069	M	4870	1		271	0	1/1/68	1/1/68	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373815115434601
170	U-1322	170 S03 E55 31 1	37.63550424	-115.83031373	M	4890	1		250	0	1/1/66	10/22/02	60	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373817115483301
170	U-1323	170 S03 E55 33CC 1	37.63522692	-115.80142415	M	4870	1		303	0	1/1/64	1/1/64	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373819115465201
170	U-1325	170 S03 E55 31CBBC1 Vineyard	37.64161498	-115.84309186	S	4879	10		280	0	9/15/64	10/22/98	57	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373830115503201
170	U-1326	170 S03 E55 36ADDC1 USGS-MX	37.64340835	-115.7346338	1	4921	80		195	0	1/1/81	8/26/99	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373833115441101
170	U-1327	170 S03 E55 36AD 1 Well (Report R60)	37.64356125	-115.72836702	M	4870	1		0	0	10/7/71	3/2/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373838115424001
170	U-1328	170 S03 E55 36BCCA1	37.64439414	-115.74864517	5	4820	10		155	1	8/15/98	8/15/98	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373840115445201
170	U-1329	170 S03 E55 32BCB 1	37.64494851	-115.82392476	S	4850	10		157	0	8/8/60	10/22/98	67	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373842115492301
170	U-1330	170 S03 E55 33AA 1	37.62068033	-115.78798484	T	4807	10		0	0	4/11/90	4/11/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373851115472001
170	U-1331	170 S03 E55 28DC 1	37.64967108	-115.79225736	M	4838	1		250	0	5/14/64	10/22/02	79	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373907115461701
170	U-1332	170 S03 E55 29 1	37.65189303	-115.8061466	M	4835	1		300	0	1/1/61	1/1/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373907115472901
170	U-1334	170 S03 E54 25 1 Southwestern	37.66473363	-115.85277284	1	4880	1		165	0	7/1/48	3/5/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373943115495701
170	U-1335	170 S03 E55 26BA 1	37.66400452	-115.75689825	T	4758	1		0	0	4/11/90	9/21/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373944115454101
170	U-1337	170 S03 E55 19CC 1	37.6660588	-115.83892529	M	4850	1		238	0	1/1/63	10/22/02	78	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373955115490201
170	U-1338	170 S03 E54 24 3	37.66481129	-115.86102582	1	4893	10		400	0	4/11/90	3/5/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373955115512901

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
170	U-1339	170 S03 E55 23DC 1 Number 6 Well	37.66399897	-115.75690103	M	4780	1		75	0	10/7/71	8/26/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373957115440501
170	U-1341	170 S03 E54 24 2	37.67191955	-115.85266179	1	4860	1		327	0	10/7/71	10/22/02	44	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374020115494101
170	U-1342	170 S03 E54 13B 1	37.68883566	-115.85837041	M	4900	1		165	0	7/1/48	7/1/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374024115502901
170	U-1343	170 S03 E54 24 1	37.67242219	-115.86087033	1	4885	1		251	0	8/20/64	10/22/02	41	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374029115501901
170	U-1345	170 S03 E56 17DC 2	37.68078293	-115.70308902	T	4846	10		260	0	10/24/51	4/10/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374051115420802
170	U-1346	170 S03 E56 17DC 1 Well (Report R60)	37.67883878	-115.69225549	M	4845	1		0	0	10/7/71	10/7/71	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374052115403001
170	U-1348	170 S03 E55 07CC 1 Well (Report R60)	37.69652736	-115.84128115	M	4850	1		0	0	11/20/69	11/20/69	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374140115490401
170	U-1350	170 S03 E55 06A 1	37.715502	-115.82864764	M	4800	1		20	0	5/5/48	5/5/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374230115491701
170	U-1351	170 S03 E56 06CA 1	37.71244827	-115.7211451	M	4763	1		0	0	10/7/71	10/7/71	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374244115420801
170	U-1352	170 S03 E56 06CA 2	37.71344253	-115.72802578	1	4763	10		0	0	4/11/90	4/11/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374247115433202
170	U-1353	170 S03 E55 05BD 1 Black Rock Well	37.71216892	-115.81642508	M	4760	1		20	0	10/7/71	10/7/71	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374247115474001
170	U-1354	170 S03 E55 05BDDD1 USBLM - Black Rock Well	37.71555773	-115.81551397	1	4751	10	110VLFL	29	0	2/20/68	4/14/95	31	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374256115485501
170	U-1355	170 S02 E56 32DAAA1 USGS-MX	37.72911501	-115.69725592	T	4921	80		189	0	11/1/80	9/20/94	14	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374345115414701
170	U-1356	170 S02 E56 32BDB 1 PN-0-3	37.73217022	-115.70808945	F	4870	10		196	0	3/11/85	4/10/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374356115422601
170	U-1357	170 S02 E55 24CB 1 USGS-MX	37.75633531	-115.74670134	T	4800	10		153	0	11/1/80	9/20/94	10	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374523115440901
170	U-1360	170 S02 E55 09AD 1 USGS-MX	37.78827842	-115.79059153	T	4921	10		192	0	1/1/81	9/20/94	12	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374729115483301
170	U-1361	170 S02 E56 06AD 1	37.80244634	-115.71058984	M	4850	1		120	0	1/1/70	1/1/70	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374806115413601
170	U-1366	170 S01 E55 22A 1 Well (Report R60)	37.85098001	-115.77418863	1	5050	1		0	0	10/7/71	3/5/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375051115445301
170	U-1367	170 S01 E55 22AB 1	37.85077721	-115.77586924	T	5030	10		0	0	4/10/90	4/10/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375103115463001
170	U-1371	170 S01 E56 28BD 1 USGS-MX	37.92022237	-115.68781217	M	5000	100		200	0	12/1/80	12/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375513115411301
170	U-1375	170 S01 E56 18DD 1 USGS-MX	37.94244329	-115.71531278	M	4900	100		200	0	12/1/80	12/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375633115425201
170	U-1388	170 S02 E56 05AD 1 USGS-MX	37.80355776	-115.69781185	T	4922	80		193	0	11/1/80	9/20/94	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380338115422001
170	U-1400	170 S03 E55 07CC 2 USGS-MX	37.69652735	-115.8413506	1	4922	80		148	0	11/1/80	3/31/94	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380738115502901
170	U-1407	170 S03 E54 12BCBC1 USGS MX	37.70327967	-115.86114838	M	4975	10		200	0	1/1/81	1/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380829115513401

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
171	U-1359	171 S02 E58 11A 2 USBLM	37.78773114	-115.4280848	M	5700	100		188	0	5/8/63	3/11/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374716115253801
171	U-1362	171 S01 E59 34CB 2 USGS-MX	37.81217706	-115.34141652	M	5100	100		1340	0	6/8/81	6/8/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374844115202601
171	U-1363	171 S01 E59 34CB 1 USGS-MX	37.81551021	-115.34919447	T	5100	100		1452	0	6/8/81	6/8/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374856115205402
171	U-1365	171 S01 E59 27CA 1 USGS-MX	37.82967684	-115.34475002	M	5020	100		200	0	1/1/80	1/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374947115203801
171	U-1369	171 N01 E60 33CC 1 USGS-MX	37.8969005	-115.25502658	M	4990	100		200	0	1/1/80	1/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375349115151501
171	U-1373	171 N01 E58 24 1 Baseline Canyon Federal 2	37.92987028	-115.35094788	F	4932	20		1560	0	10/31/96	9/16/04	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375547115244201
171	U-1386	171 S02 E58 11A 1 USBLM	37.79273107	-115.42864038	M	5200	1		188	0	5/8/63	5/8/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380301115252901
171	U-1395	171 N03 E59 27AD 2 USGS-MX	38.0932852	-115.33169335	S	5010	20		0	0	8/29/93	9/21/94	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380536115195102
171	U-1405	171 N03 E59 12AA 1 USGS-MX	38.13967416	-115.29502511	M	5080	100		200	0	11/1/80	11/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380823115173901
171	U-1406	171 N03 E59 12AA 2 USGS-MX	38.13967416	-115.29502511	S	5087	20		354	0	8/27/93	9/21/94	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380823115173902
171	U-1883	171 S01 E59 34CB 3 CL-VF-O-1A AMS Map	37.81662134	-115.34752778	M	5125	0		0	1			0	

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
172	U-1368	172 S01 E57 02BB 1	37.89661589	-115.54614283	M	5546	5		500	0	2/21/44	3/20/90	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375348115324301
172	U-1376	172 N05 E59 32C 1	38.24744816	-115.37669123	M	5300	1		0	0	2/27/48	2/27/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375742115223001
172	U-1383	172 N02 E57 22BBC 1 USGS-MX (Garden Valley)	38.02605781	-115.5630875	T	5550	10		1010	0	12/12/80	9/16/04	40	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380132115333501
172	U-1384	172 N02 E57 22BA 2 USGS-MX	38.02550235	-115.56058746	T	5400	100		1032	0	12/12/80	3/31/94	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380132115333502
172	U-1385	172 N02 E57 22BBC 3 USGS-MX	38.02550232	-115.56142081	T	5550	10		300	0	3/20/90	3/20/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380132115333503
172	U-1389	172 N02 E58 03AA 1 USGS-MX	38.07217182	-115.43919554	T	5200	20		200	0	10/1/80	3/23/94	13	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380348115265001
172	U-1396	172 N03 E57 16C 1	38.11827785	-115.57753115	M	6200	1		92	0	5/9/63	5/9/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380643115344201
172	U-1397	172 N03 E59 18BB 1 USGS-MX	38.12578301	-115.39947168	T	5200	80		200	0	10/1/80	9/4/91	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380646115235001
172	U-1398	172 N03 E58 15B 1	38.12605965	-115.44641695	M	5300	1		260	0	1/20/60	1/20/60	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380718115270101
172	U-1401	172 N03 E58 15D 1	38.12772585	-115.46475058	M	5307	5		260	0	1/20/60	3/20/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380740115275001
172	U-1403	172 N03 E59 10BD 1 USGS-MX (Coal Valley Well)	38.13745091	-115.33974818	F	5560	20		1837	2	12/8/80	9/16/04	109	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380758115204601
172	U-1404	172 N03 E57 16CBD 1	38.13411035	-115.59197579	M	6152	10		92	0	5/9/63	3/20/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380803115352801
172	U-1408	172 N03 E58 01DA 1 USGS-MX	38.15300471	-115.40197123	T	5200	20		100	0	10/1/80	9/21/94	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380835115242601
172	U-1412	172 N04 E59 30CD 1 USGS-MX	38.17744895	-115.3936373	M	5240	20		100	0	10/1/80	3/12/85	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380937115233401
172	U-1413	172 N04 E58 33DB 1 USGS-MX	38.16161424	-115.46252774	M	5600	100		200	0	11/1/80	11/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380942115274201
172	U-1414	172 N04 E58 33DB 2 USGS-MX	38.16161424	-115.46252774	S	5520	20		400	0	9/14/93	9/21/94	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380942115274202
172	U-1415	172 N04 E58 36A 1 USBLM - Lund (Report 18)	38.16633769	-115.40752665	M	5250	0		0	0	5/9/63	5/9/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380959115242401
172	U-1416	172 N04 E58 36A 2 USBLM - Garden Valley	38.16994882	-115.40419319	M	5217	20	110VLFL	27	0	5/9/63	4/11/96	42	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381000115240001
172	U-1417	172 N04 E58 23D 1 Well (Report R18)	38.18522591	-115.42280437	M	5400	0		0	0	1/1/00	1/1/00	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381107115251901
172	U-1419	172 N04 E58 26ABA 1 USBLM	38.18967027	-115.42308208	T	5338	10		20	0	3/20/90	3/20/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381123115252001
172	U-1420	172 N04 E58 22DB 1 USGS-MX	38.19078087	-115.44391578	M	5520	100		100	0	1/1/81	1/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381127115263501
172	U-1421	172 N04 E58 22DB 2 USGS-MX	38.19078087	-115.44391578	S	5520	20		398	0	9/14/93	9/21/94	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381127115263502
172	U-1425	172 N04 E59 06DDD 1	38.2282818	-115.37752494	T	5292	10		0	0	5/9/63	3/20/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381323115223401
172	U-1426	172 N04 E59 06D 1	38.23383703	-115.38724725	M	5200	1		200	0	5/9/63	5/9/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381339115225501
172	U-1432	172 N05 E59 32D 1	38.24689278	-115.36946887	M	5200	1		0	0	5/9/63	5/9/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381437115214901
172	U-1434	172 N04 E59 05ABC 1 USBLM	38.24467099	-115.35252413	M	5345	10		0	0	5/9/63	3/20/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381441115210601

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
181	U-1394	181 N03 E63 27CAA 1 USGS-MX (N. Dry Lake)	38.09190245	-114.89584265	F	5560	10		2395	1	11/21/80	9/16/04	91	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380531114534201
181	U-1510	181 S03 E64 12AC 1 USGS-MX(S. Dry Lake Well)	37.70413031	-114.75944855	T	4640	5		1000	0	4/20/80	9/29/04	60	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374215114453101
181	U-1511	181 S03 E64 12AC 2 USGS-MX	37.70413031	-114.75944855	T	4640	10		1300	0	1/26/80	3/10/90	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374215114453102
181	U-1512	181 S03 E64 12AC 3 USGS-MX	37.70413031	-114.75944855	T	4640	10		798	0	1/26/80	3/10/90	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374215114453103
181	U-1521	181 S02 E65 19CA 1	37.75996368	-114.74250357	T	5700	20		156	0	4/16/83	3/10/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374536114443001
181	U-1556	181 N01 E62 24ABB 1 USBLM	37.93996195	-114.74667122	M	4692	16		0	0	3/10/90	3/10/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375624114444501
181	U-1595	181 N03 E65 21D 1 Bristol Well	38.10440437	-114.68916827	T	5460	10		80	0	11/26/62	9/21/94	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380550114412301
181	U-1598	181 N03 E64 20BD 1 USBLM - Coyote Well	38.11106973	-114.82722902	T	5067	20		380	0	3/11/83	3/10/90	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380616114494101
181	U-1620	181 N04 E64 07DC 1 USGS-MX (Muleshoe Valley)	38.21690142	-114.83556189	T	5530	10		1190	0	7/28/81	9/16/04	44	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381256114500701
181	U-1621	181 N04 E64 07DC 2 USGS-MX	38.21856807	-114.83500631	T	5535	10		672	0	7/2/81	7/21/94	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381256114500702
181	U-1622	181 N04 E64 07DC 3 USGS-MX	38.21856807	-114.83500631	T	5535	10		1134	0	9/5/81	3/10/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381256114500703
181	U-1892	181 N03 E63 03DCC 1	38.14579063	-114.89417558	U	5675	0		0	1			0	

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
197	U-1491	197 S03 E71 07DB 1	37.60719129	-114.13136947	S	5790	1		0	0	11/17/67	11/17/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373632114084201
197	U-1508	197 S03 E70 07AD 1	37.70357714	-114.19609345	F	6240	40		232	0	5/5/50	5/5/50	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374213114114301
197	U-1522	197 S02 E71 21BDAC1	37.76079953	-114.05747927	S	5876	2		273	0	9/10/58	3/12/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374539114032401
197	U-1540	197 S01 E71 17BDBB1	37.86413082	-114.0760894	S	6220	10		120	0	3/12/85	3/12/85	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375151114043101

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
203	U-1505	203 S03 E67 28C 1	37.65468701	-114.5086044	M	4460	1		118	0	6/17/65	10/14/02	70	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373919114290401
203	U-1506	203 S03 E67 22B 1	37.67718708	-114.48777026	M	4600	1		175	0	3/16/63	10/14/02	59	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374034114274601
203	U-1507	203 S03 E67 14ACAB1	37.68996494	-114.4508244	S	4680	10		158	1	9/18/98	9/18/98	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374124114270001
203	U-1509	203 S03 E67 11A 1	37.70635379	-114.46332494	M	4600	1		204	0	4/1/63	9/30/75	18	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374215114262401
203	U-1513	203 S03 E67 02D 1	37.71163156	-114.46138044	M	4615	1		158	0	4/1/58	10/14/02	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374243114261401
203	U-1514	203 S03 E67 02A 1	37.72135379	-114.45026894	M	4605	1		225	0	2/24/62	3/20/97	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374317114265801
203	U-1515	203 S02 E67 35A 1	37.73746487	-114.46054716	M	4650	1		193	0	7/20/66	10/14/02	64	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374400114260701
203	U-1516	203 S02 E67 26D 1	37.74190931	-114.46360284	M	4650	1		115	0	12/1/60	12/1/60	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374411114261401
203	U-1517	203 S02 E67 25C 1	37.74357599	-114.45165797	M	4650	1		135	0	2/1/61	2/1/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374416114253301
203	U-1518	203 S02 E67 25DABB1	37.74468711	-114.42526813	U	4659	0		0	1	7/20/66	10/14/02	64	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374441114252801
203	U-1519	203 S02 E67 24D 1	37.75746479	-114.44387996	M	4700	1		0	0	11/16/67	10/14/02	59	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374509114250901
203	U-1520	203 S02 E68 19A 1	37.76190919	-114.42582376	M	4695	1		165	0	6/1/61	6/1/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374536114241501
203	U-1523	203 S02 E68 18D 1	37.77079798	-114.42276812	M	4700	1		170	0	1/1/52	1/1/52	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374601114240501
203	U-1524	203 S02 E68 17B 1	37.77996455	-114.41387893	M	4710	1		152	0	11/1/55	11/1/55	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374634114233401
203	U-1525	203 S02 E68 07D 3	37.78524226	-114.42415709	M	4730	1		105	0	2/21/63	2/21/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374648114235401
203	U-1526	203 S02 E68 08C 1	37.78857556	-114.41110107	M	4715	1		0	0	9/19/49	2/21/63	14	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374656114232401
203	U-1527	203 S02 E68 07A 1 Mormon Church	37.78968666	-114.41915692	M	4730	1		135	0	12/5/63	12/5/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374704114235101
203	U-1528	203 S02 E68 06D 1	37.79968654	-114.42415713	M	4790	1		100	0	5/1/62	5/1/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374737114240501
203	U-1529	203 S02 E68 05CDDB1	37.79718658	-114.40026737	S	4733	10		0	0	4/9/83	4/9/83	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374750114235801
203	U-1530	203 S02 E68 05CDDB2	37.79718658	-114.40026737	S	4733	10		180	0	4/9/83	4/9/83	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374750114235802
203	U-1531	203 S02 E68 08B 5 USGS - Panaca Valley	37.79274218	-114.41193444	M	5000	1		110	0	6/28/49	10/14/02	103	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374750114242001
203	U-1532	203 S02 E68 05A 1	37.80774201	-114.40304527	M	4790	1		160	0	7/1/59	7/1/59	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374802114225701
203	U-1533	203 S02 E69 06B 1 USBLM	37.80774203	-114.3110975	M	5450	1		300	0	12/3/63	12/3/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374807114180401
203	U-1534	203 S02 E68 05B 1	37.80579759	-114.41110111	M	4800	1		0	0	12/30/47	2/21/63	14	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374810114232001
203	U-1535	203 S01 E68 33C 1	37.80746424	-114.3727664	M	4800	1		106	0	12/4/63	12/4/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374827114221901
203	U-1536	203 S01 E68 32D 1	37.8155197	-114.40415644	M	4810	1		75	0	12/4/63	12/4/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374829114225301
203	U-1537	203 S01 E68 33B 1	37.81940855	-114.39304494	S	4784	1		120	0	4/25/46	3/20/97	38	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374910114231001
203	U-1538	203 S01 E68 28C 1	37.82635291	-114.39526725	M	4900	1		154	0	3/1/46	10/14/02	80	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374911114222301

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
204	U-1468	204 S06 E69 09ADB 1 USBLM	37.44357856	-114.27359305	F	5748	10		0	0	3/14/85	3/14/85	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=372637114162201
204	U-1472	204 S05 E70 31ACBD1 USBLM	37.47219106	-114.20609155	S	5555	10		199	0	6/30/54	3/14/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=372820114121901
204	U-1474	204 S05 E69 15ADDD1	37.5135777	-114.25275873	S	5349	2		40	0	9/11/59	3/14/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373049114150701
204	U-1476	204 S05 E69 11D 1	39.15771031	-115.58448271	M	5300	1		127	0	10/1/62	10/1/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373135114140301
204	U-1477	204 S05 E68 09B 1 USBLM	37.52635579	-114.24025874	M	5600	1		200	0	1/1/63	1/1/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373154114230301
204	U-1479	204 S04 E70 33BD 1 LA & Salt Lake Railroad	37.53302101	-114.40082146	M	5546	20		499	0	5/9/43	5/9/43	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373324114095301
204	U-1480	204 S04 E70 33CAB 1 LA & Salt Lake Railroad	37.55663576	-114.16553623	T	5546	2		499	0	5/9/43	3/14/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373324114095601
204	U-1481	204 S04 E69 27CDCB1 USBLM	37.55663573	-114.16636957	F	5638	2		250	0	3/14/85	3/14/85	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373355114152301
204	U-1488	204 S04 E70 11CCDD1 USBLM	37.56524398	-114.25720408	S	5789	5		197	0	5/11/51	3/14/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373626114075001
204	U-1492	204 S04 E70 11D 1	37.69941206	-114.08664676	M	5880	1		197	0	5/1/51	5/1/51	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373637114071101
204	U-1493	204 S04 E68 08C 1 Caliente Public Utilities	37.61024718	-114.11581373	M	4658	20		185	0	11/29/52	11/29/52	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373639114241201
204	U-1495	204 S04 E67 08CBBB1 City of Caliente Well 8	37.61079857	-114.40415543	T	4390	20		195	1	3/5/66	3/5/66	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373649114305701
204	U-1496	204 S04 E67 07DAAA1 City of Caliente Well 10	37.61357585	-114.51666024	F	4390	10		165	0	3/18/70	4/4/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373649114310201
204	U-1497	204 S04 E67 07DAAA2 City of Caliente Well 9	37.61357585	-114.51804918	F	4390	20		160	1	3/18/70	3/18/70	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373650114310001
204	U-1499	204 S04 E67 09BDBD1	37.61635373	-114.49304813	F	4421	2		52	0	9/14/70	3/14/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373659114293201
204	U-1500	204 S04 E67 09AD 1	37.61774266	-114.48304771	T	4445	10		110	0	3/7/68	4/3/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373704114285601
204	U-1501	204 S04 E67 09BC 1	37.6177426	-114.49693719	F	4420	10		52	0	9/14/70	4/3/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373704114294601
204	U-1503	204 S04 E67 05C 1 Caliente Public Utilities	37.62607582	-114.52443836	M	4410	1		130	0	4/1/46	4/1/46	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373727114300201
204	U-1504	204 S03 E71 31CBBA1 USBLM	37.64274677	-114.09748021	F	5948	2		262	0	3/12/85	3/12/85	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373834114054801
204	U-1910	204 S04 E67 08 2	37.61579809	-114.51416014	U	4397	0		0	1			0	
204	U-2078	204 S04 E67 08ACBC1 City of Caliente Well 1	37.61635367	-114.50777098	F	4410	20		0	1			0	
204	U-2079	204 S04 E67 08ACBA1 City of Caliente Well 2	37.61690923	-114.50665982	F	4410	20		0	1			0	
204	U-1498	205 S04 E67 08B 1 Caliente Public Utilities	37.61385363	-114.51749361	F	4390	1		185	0	11/1/52	11/1/52	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373656114300501

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
207	U-644	207 N05 E54 14DD 1	38.28937809	-117.05285575	T	4815	5		200	0	10/8/82	1/5/94	9	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381745115514201
207	U-655	207 N05 E60 03ABBA1 USGS-MX	38.32632289	-117.00896561	F	5165	5		202	0	11/1/80	9/21/94	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381941115131801
207	U-657	207 N06 E62 31ADD 1	38.33298872	-115.88337398	T	5450	20		300	0	3/13/85	3/9/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382005115023701
207	U-664	207 N06 E61 27AADC1 USGS-MX	38.3524331	-116.3311663	T	5210	5		96	0	9/1/80	9/21/94	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382111115055901
207	U-669	207 N06 E60 19CA 1 USGS-MX	38.36326645	-115.87087371	T	5360	10		200	0	12/1/80	12/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382151115164501
207	U-671	207 N06 E60 22BBBC1 USBLM	38.37072408	-116.22690546	5	5200	100		100	0	3/12/85	3/9/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382211115133801
207	U-695	207 N07 E60 30AACD1 USBLM	38.68911083	-115.10584982	M	5580	5		433	0	3/9/90	3/9/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382627115160201
207	U-698	207 N07 E61 19BDDC1 USGS-MX	38.70411069	-115.10001641	M	5245	5		101	0	11/1/80	9/4/91	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382718115094901
207	U-1299	207 N04 E61 16D 1	38.20384243	-115.12751774	M	4400	1		0	0	5/10/63	5/10/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373614115083701
207	U-1424	207 N04 E60 13AD 1 USGS-MX	38.20939713	-115.18307555	M	5210	100		165	0	3/1/81	3/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381234115105601
207	u-1849	207 N06 E61 09CCBB1 Hot Creek Campground Well	38.38828281	-115.13362787	U	0	0		0	1			0	

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
208	U-1333	208 N03 E62 35B 2 USBLM	38.07967911	-114.99279054	M	6000	1		0	0	5/8/63	5/8/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373924115003101
208	U-1349	208 N03 E62 08C 1 USBLM	38.13023344	-115.04362589	M	5000	1		0	0	5/1/63	5/1/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374218115031501
208	U-1358	208 S02 E61 23D 2	37.75690308	-115.10585287	M	4255	1		480	0	3/10/85	9/9/92	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374525115061801
208	U-1390	208 N03 E62 35B 1 USBLM	38.0805124	-114.99584619	S	4870	0		270	0	5/8/63	9/21/94	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380450114594201
208	U-1392	208 N03 E62 35BBB 1 USBLM	38.08467904	-114.99390166	F	4957	1		315	0	5/8/63	3/10/85	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380505114593501
208	U-1399	208 N03 E62 17B 1 USBLM	38.12662237	-115.04390371	M	5036	1		205	0	5/1/63	3/10/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380736115023501

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
228	U-218	228 S12 E47 18AAC 1 BGC-2 Well	36.89855692	-116.75478184	S	3261	20	110VLFL	40	0	9/15/99	9/25/00	13	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365355116451401
228	U-219	228 S12 E47 18AAB 1 Beatty GID BGC-1 Well	36.89939022	-116.75644855	S	3270	20	100VLFL	0	0	5/26/99	5/26/99	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365358116452001
228	U-220	228 S12 E47 07DBA 1 Beatty Wtr & Swr - Well 2	36.90633449	-116.75867094	M	3300	20		195	0	9/10/63	9/10/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365409116452301
228	U-221	228 S12 E47 07DBD 1 Beatty Wtr & Swr - Well 3	36.90494564	-116.75783757	S	3290	20	111ALVF	300	0	8/30/65	8/30/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365420116453001
228	U-222	228 S12 E47 07ACD 1 Central Beatty Well	36.90855668	-116.75783764	S	3300	20		24	0	2/26/97	5/7/98	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365431116452501
228	U-224	228 S12 E47 06DC 1 Beatty Wtr & Swr Tst Hole	36.9157787	-116.76144895	M	3365	20	100VLFL	175	0	6/12/63	6/12/63	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365457116515801
228	U-227	228 S12 E47 06DCC 1 Beatty Wtr & Swr - Well 1	36.91550094	-116.76089338	S	3365	20		200	0	10/26/62	10/26/62	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365524116444001
228	U-228	228 S12 E46 02BDAC1 Beatty Wtr&Swr Summit Well	36.92438916	-116.79978296	F	3882	20		700	0	1/15/89	2/20/00	52	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365527116475301
228	U-231	228 S11 E47 33DAC 1 Perlite Canyon Ranch Well	36.93439002	-116.72005966	S	3510	20		175	0	4/12/88	3/21/97	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365604116430901
228	U-232	228 S11 E46 34ACAD1 Beatty Wtr & Swr Mdl Well	36.93966642	-116.81339454	S	4110	20		700	0	6/23/93	12/18/98	45	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365619116483901
228	U-236	228 S11 E47 28DCD 1 Beatty Wash Terrace Well	36.94438979	-116.72172656	S	3460	20		39	0	10/13/84	9/22/04	61	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365640116431501
228	U-237	228 S11 E46 26DCC 2 Lower Indian Springs Well	36.94494429	-116.79672777	S	4020	20		0	0	7/16/96	6/26/01	42	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365642116474501
228	U-238	228 S11 E47 27BCDD1 ER-OV-04a	36.95133423	-116.71255983	S	3491.36	1	100VLFL	151	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365705116424201
228	U-239	228 S11 E46 26BCDC1 Beatty Wtr&Swr Upr Indian	36.95161071	-116.80422799	S	4240	20		693	0	8/22/88	12/20/99	53	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365709116481101
228	U-240	228 S11 E47 27BCB 1 Ute Springs Drainage Well	36.95355636	-116.71561549	S	3500	20		10.5	0	5/22/97	6/26/01	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365713116425301
228	U-243	228 S11 E49 14 1 ER-EC-7	36.98490107	-116.47857681	H	4805	1	120VLCC	1304	0	10/13/99	9/21/04	19	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365910116284401
228	U-244	228 S11 E47 09CBD 1 Pioneer Road Seep Well	36.99133313	-116.73061657	S	3650	20		6.7	0	5/22/97	6/26/01	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365929116434701
228	U-245	228 S11 E47 09DBD 1 Boiling Pot Rd Well	36.99272213	-116.72200529	S	3620	20		12.2	0	5/8/97	6/26/01	42	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365934116431601
228	U-246	228 S11 E48 10CABB1 ER-OV-03c	36.99661285	-116.60200251	S	4191.5	1	120VLCC	542	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365948116360401
228	U-247	228 S11 E48 10CABB2 ER-OV-03c2	36.99661285	-116.60200251	S	4191.91	1	120VLCC	321	0	10/27/97	9/21/04	35	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365948116360402
228	U-248	228 S11 E47 10ACAB1 ER-OV-03a	36.99883338	-116.70533834	S	3844.36	1	120VLCC	251	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365956116421601
228	U-249	228 S11 E47 10ACAB2 ER-OV-03a2	36.99883338	-116.70533834	S	3843.78	1	120VLCC	642	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365956116421602
228	U-250	228 S11 E47 10ACAB3 ER-OV-03a3	36.99883338	-116.70533834	S	3843.78	1	120VLCC	133	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365956116421603
228	U-251	228 S11 E48 01 2 Beatty Wash Windmill Well	37.00383565	-116.55783491	T	4400	10		480	0	7/30/70	7/30/70	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370014116332501
228	U-252	228 S11 E47 04ACC 1 OVM ET Well	37.01077721	-116.72422794	S	3688	10		13.2	0	5/8/97	6/26/01	46	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370039116432401
228	U-254	228 S10 E47 33CCA 1 Springdale ET Deep Well	37.02022129	-116.73117276	S	3712	10	111ALVM	9	0	6/20/96	6/26/01	60	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370113116434901
228	U-255	228 S10 E47 33CCA 2 Springdale ET Shallow Well	37.02022129	-116.73117276	S	3712	10	110UCDD	5.6	0	8/14/96	6/26/01	57	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370113116434902

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
228	U-256	228 S10 E47 33CCB 1 Springdale Lower Well	37.02022127	-116.73228389	S	3710	20	111ALVM	11.3	0	6/20/96	6/26/01	58	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370113116435301
228	U-257	228 S10 E47 32ADC 1 Springdale Upper Well	37.02522107	-116.73645077	U	3775	10		91	0	6/6/96	9/29/04	72	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370131116440801
228	U-258	228 S10 E48 31ACBC1 ER-OV-03b	37.02744469	-116.6522821	S	4232.67	1	100VLFL	395	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370139116390501
228	U-261	228 S10 E47 27DBCD1 ER-OV-02	37.03605466	-116.70506135	S	3880.33	1	100VLFL	200	0	10/27/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370210116421501
228	U-262	228 S10 E47 30DCC 1 Springdale Windmill Well	37.0324427	-116.75950693	S	3870	10		18	0	4/1/41	9/25/00	45	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370218116455201
228	U-263	228 S10 E47 27BAA 1 OVU-Lower ET Well	37.04494326	-116.70895052	S	3861	10	110VLFL	10.9	0	8/3/98	6/26/01	31	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370242116422901
228	U-265	228 S10 E46 24DDDC1 ER-OV-05	37.04605321	-116.77284071	S	3937.83	1	100VLFL	200	1	10/24/97	9/21/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370246116461901
228	U-266	228 S10 E47 22CCD 1 OVU-Middle ET Well	37.04688759	-116.71228398	S	3856	10	110VLFL	11.1	0	1/7/99	6/26/01	26	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370249116424101
228	U-274	228 S10 E47 22DBD 1 OVU-Dune Well	37.05022099	-116.70395051	S	3883	10	111DUNE	16.9	0	4/13/98	6/26/01	37	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370301116421101
228	U-279	228 S10 E48 12 1 ER-EC-5	37.08449512	-116.5654533	H	5077	1	120VLCC	2447	0	10/13/99	9/21/04	19	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116335201
228	U-280	228 S10 E47 11ADAD1 ER-OV-01	37.08438724	-116.68117289	S	4072.85	1	120VLCC	180	0	10/27/97	10/6/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116404901
228	U-281	228 S10 E47 11ADAD2 ER-OV-06a	37.08438724	-116.68117289	S	4073.04	1	120VLCC	536	0	10/27/97	10/6/04	41	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116404902
228	U-282	228 S10 E47 11ADAD3 ER-OV-06a2	37.08438724	-116.68117289	S	4072.57	1	120VLCC	65	1	10/27/97	10/6/04	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116404903
228	U-286	228 S10 E48 05 1 ER-EC-8	37.1027906	-116.6321748	H	4333	1	120VLCC	1948	0	10/13/99	10/6/04	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370610116375301
228	U-303	228 S09 E48 24 1 ER-EC-2A (1635-4973 ft)	37.14493837	-116.5682712	H	4902	1	120VLCC	4961	0	6/13/00	6/13/00	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370852116340501
228	U-304	228 S09 E48 24 2 ER-EC-2A (1635-2236 ft)	37.14493837	-116.5682712	H	4902	1	120VLCC	2450	0	12/12/00	10/6/04	14	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370852116340502
228	U-316	228 S09 E48 17 1 ER-EC-4 (952-3487 ft)	37.15880604	-116.6319537	H	4759.65	1	120VLCC	3445	0	10/13/99	6/14/00	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370935116375301
228	U-317	228 S09 E48 17 2 ER-EC-4 (952-2295 ft)	37.15880604	-116.6319537	H	4759.65	1	120VLCC	2365	0	10/5/00	10/7/04	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370935116375302
228	U-336	228 S09 E49 03 1 ER-EC-6 (1581-5000 ft)	37.18871709	-116.49757561	H	5604	1	120VLCC	4905	0	4/20/99	3/13/00	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371120116294801
228	U-337	228 S09 E49 03 2 ER-EC-6 (1581-3820 ft)	37.18871709	-116.49757561	H	5604	1	120VLCC	4302	0	6/6/00	9/7/04	19	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371120116294802
228	U-352	228 S08 E49 32 1 ER-EC-1	37.20625764	-116.53063246	H	6026	1	120VLCC	4791	0	5/10/99	9/7/04	22	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371223116314701
228	U-358	228 S08 E49 26 3 ER-20-5-1 (3-in string)	37.2199976	-116.47806679	H	6241.8	0.1	120VLCC	2374	0	11/17/95	11/17/95	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371312116283801
228	U-360	228 S08 E49 26 1 U -20y (2602 ft)	37.22073099	-116.47506942	H	6256.7	0.1	120VLCC	2602	0	12/18/74	2/18/75	9	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371315116282701
228	U-362	228 S08 E49 22 1 ER-20-1	37.22240002	-116.49239538	H	6180.9	0.1	122TVCN	2065	0	10/12/94	9/8/04	42	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371321116292301
228	U-387	228 S08 E48 13 1 PM- 3 (1647 ft)	37.23775022	-116.47363907	H	5822.8	0.1	120VLCC	1647	0	9/9/88	9/13/88	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371421116333701
228	U-388	228 S08 E48 13 2 PM- 3 (3019 ft)	37.23902013	-116.5610728	H	5822.8	0.1	120VLCC	3019	2	9/21/88	9/30/91	21	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371421116333702
228	U-389	228 S08 E48 13 3 PM- 3-1 (1919 - 2144 ft)	37.23902013	-116.5610728	H	5822.8	0.1	120VLCC	2145	0	4/10/92	9/7/04	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371421116333703
228	U-390	228 S08 E48 13 4 PM- 3-2 (1442 - 1667 ft)	37.23902013	-116.5610728	H	5822.8	0.1	120VLCC	1667	0	4/10/92	9/7/04	46	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371421116333704

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
228	U-405	228 S08 E49 15 1 UE-20d	37.24715393	-116.99784757	M	6253	1	120VLCC	4490	0	8/19/64	1/14/65	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371452116284901
228	U-406	228 S08 E49 15 2 U -20ak	37.24765545	-116.48106743	H	6235.2	0.1	120VLCC	2036	0	7/11/82	11/30/85	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371452116292101
228	U-407	228 S08 E49 15 3 U -20bb (1900 ft)	37.24779969	-116.4899457	H	6226.3	5	120VLCC	1900	0	7/15/88	12/18/89	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371452116293901
228	U-408	228 S08 E49 15 6 U -20bb (2220 ft)	37.2478079	-116.49510431	H	6226.3	0.1	120VLCC	2220	0	2/13/90	4/19/90	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371452116293902
228	U-409	228 S08 E49 15 7 U -20bb 1	37.2478079	-116.49510431	H	6226	0.1	120VLCC	2322	0	5/15/90	7/9/90	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371452116293903
228	U-410	228 S08 E49 16 1 U -20at 1	37.24762735	-116.49510153	H	6240.7	0.1	120VLCC	2197	0	12/9/86	2/13/87	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371452116303301
228	U-435	228 S08 E49 10 1 U -20bc	37.25743128	-117.02757021	M	6146.2	0.1	120VLCC	2000	0	7/7/88	8/2/89	34	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371547116292601
228	U-446	228 S08 E49 03 1 UE-20f (13686 ft)	37.27078893	-117.09410162	5	6116.3	0.1	120VLCC	13686	0	1/13/65	11/24/74	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371617116291701
228	U-447	228 S08 E49 03 3 UE-20f (4543 ft)	37.27135249	-116.48882294	H	6116.3	0.1	120VLCC	4543	0	4/7/64	11/13/00	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371617116291702
228	U-448	228 S08 E49 03 2 U -20f	37.27135249	-116.48882294	H	6117	0.1	120VLCC	4202	0	5/19/65	11/13/00	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371617116291801
228	U-1751	228 S11 E48 01 1 Beatty Wash Windmill Well	37.00383565	-116.55783491	T	4400	10		0	1			0	

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
229	U-51	229 S15 E48 02CC 2 NC-EWDP- 3S	36.68156023	-116.53810538	H	2619	0.5	120VLCC	550	0	3/6/99	3/12/99	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364054116321301
229	U-52	229 S15 E48 02CC 3 NC-EWDP- 3S (Zone 3)	36.68156023	-116.53810538	H	2619	0.5	120VLCC	550	0	5/20/99	3/11/03	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364054116321302
229	U-53	229 S15 E48 02CC 4 NC-EWDP- 3S (Zone 2)	36.68156023	-116.53810538	H	2619	0.5	120VLCC	550	0	5/20/99	3/11/03	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364054116321303
229	U-54	229 S15 E48 02CC 5 NC-EWDP- 3S (Zone 1)	36.68156023	-116.53810538	H	2619	0.5	120VLCC	550	0	5/21/99	5/21/99	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364054116321304
229	U-55	229 S15 E48 02CC 1 NC-EWDP- 3D	36.68155467	-116.53806927	H	2619.19	0.5	120SDMR	2500	0	3/6/99	8/17/03	115	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364054116321401
229	U-58	229 S14 E48 36DDD 1 Crater Flat 3	36.68495233	-116.50810793	S	2725.6	0.1	100VLFL	460	2	1/14/94	9/24/04	132	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364105116302601
229	U-65	229 S14 E48 33AA 1 NC-EWDP- 9SX	36.6957126	-116.56299197	H	2615.81	0.5	120VLCC	360	0	1/14/99	1/21/99	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364145116334401
229	U-66	229 S14 E48 33AA 2 NC-EWDP- 9SX (Zone 4)	36.6957126	-116.56299197	H	2615.81	0.5	120VLCC	354	0	5/18/99	5/15/03	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364145116334402
229	U-67	229 S14 E48 33AA 3 NC-EWDP- 9SX (Zone 3)	36.6957126	-116.56299197	H	2615.81	0.5	100VLFL	354	0	5/18/99	5/15/03	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364145116334403
229	U-68	229 S14 E48 33AA 4 NC-EWDP- 9SX (Zone 2)	36.6957126	-116.56299197	H	2615.81	0.5	100VLFL	354	0	5/19/99	5/15/03	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364145116334404
229	U-69	229 S14 E48 33AA 5 NC-EWDP- 9SX (Zone 1)	36.6957126	-116.56299197	H	2615.81	0.5	100VLFL	354	0	5/19/99	5/15/03	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364145116334405
229	U-78	229 S14 E49 29BC 1 NC-EWDP-28P	36.70788574	-116.48871879	1	2767.51	0.2		459	0	1/30/03	8/17/03	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364229116291601
229	U-91	229 S14 E49 20BB 1 NC-EWDP-16P	36.72474676	-116.48950517	1	2889.12	0.2		560	0	1/30/03	8/17/03	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364329116291901
229	U-94	229 S14 E48 22 1 NC-EWDP-7S	36.72555982	-116.55700354	H	2745.67	0.5	112TUFF	45	0	2/25/00	8/17/03	37	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364332116332201
229	U-95	229 S14 E48 22 2 NC-EWDP-7SC	36.72550426	-116.55706465	H	2747.65	0.5	100VLFL	460	0	2/14/01	4/2/01	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364332116332202
229	U-96	229 S14 E48 22 3 NC-EWDP-7SC (Zone 4)	36.72550426	-116.55706465	H	2747.65	0.5	120VLCC	458	0	3/28/03	3/28/03	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364332116332203
229	U-97	229 S14 E48 22 4 NC-EWDP-7SC (Zone 3)	36.72550426	-116.55706465	H	2747.65	0.5	100VLFL	458	0	9/12/02	3/21/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364332116332204
229	U-98	229 S14 E48 22 5 NC-EWDP-7SC (Zone 2)	36.72550426	-116.55706465	H	2747.65	0.5	100VLFL	458	0	9/13/02	3/19/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364332116332205
229	U-99	229 S14 E48 22 6 NC-EWDP-7SC (Zone 1)	36.72550426	-116.55706465	H	2747.65	0.5	100VLFL	458	0	9/13/02	3/19/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364332116332206
229	U-104	229 S14 E49 18DB 1 NC-EWDP-27P	36.73390778	-116.49762231	1	2973.63	0.2		631	0	2/6/03	8/17/03	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364402116294801
229	U-140	229 S13 E49 33 1 USW WT-11	36.78031848	-116.46821048	H	3589.6	0.1	120VLCC	1365	0	9/1/83	7/28/98	96	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364649116280201
229	U-143	229 S13 E48 27C 1 USW VH-1	36.79220348	-116.55271275	H	3161.1	0.1	120VLCC	2501	1	10/28/80	9/24/04	310	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364732116330701
229	U-145	229 S13 E48 27C 2 USW VH-1	36.79220348	-116.55271275	H	3161.1	0.1		2501	0	3/10/85	10/14/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364758116331701
229	U-148	229 S13 E49 20 1 USW WT-10	36.80699291	-116.48547814	H	3685.7	0.1	120VLCC	1321	1	8/30/83	6/21/99	179	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364825116290501
229	U-152	229 S13 E48 21CAA 3 USW VH- 2	36.80585844	-116.57784108	H	3200.1	0.1		4000	0	3/10/85	3/10/85	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364837116345201
229	U-154	229 S13 E49 16 4 USW G- 3	36.81797897	-116.46774972	H	4857.3	0.1	120VLCC	5031	0	3/31/83	6/27/95	57	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364905116280101
229	U-158	229 S13 E49 17 1 USW WT-7	36.82566761	-116.4834199	H	3926.8	0.1	120VLCC	1579	0	8/30/83	6/21/99	171	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364933116285701
229	U-162	229 S13 E49 16 2 USW H- 3 HTH	36.82831214	-116.46783038	H	4866.1	0.1	112TUFF	4000	0	9/10/82	5/18/84	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364942116280001

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
229	U-163	229 S13 E49 16 6 USW H- 3 HTH	36.82831214	-116.46783038	H	4866.1	0.1		4000	0	3/14/83	11/21/83	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364942116280002
229	U-164	229 S13 E49 16 7 USW H- 3 HTH	36.82831214	-116.46783038	H	4866.1	0.1		4000	0	3/14/83	11/21/83	16	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364942116280003
229	U-165	229 S13 E49 16 8 USW H- 3 HTH	36.82831214	-116.46783038	H	4866.1	0.1		4000	0	6/5/84	6/16/99	74	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364942116280004
229	U-166	229 S13 E49 16 9 USW H- 3 HTH	36.82831214	-116.46783038	H	4866.1	0.1		4000	0	6/5/84	6/16/99	90	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364942116280005
229	U-182	229 S12 E49 34 2 USW H- 6 HTH	36.84689781	-116.4827423	H	4270.7	0.1		4002	0	12/15/82	10/24/83	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365049116285501
229	U-183	229 S12 E49 34 3 USW H- 6 HTH	36.84689781	-116.4827423	H	4270.7	0.1		4002	0	3/15/83	5/6/94	36	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365049116285502
229	U-184	229 S12 E49 34 4 USW H- 6 HTH	36.84689781	-116.4827423	H	4270.7	0.1		4002	0	3/15/83	6/29/94	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365049116285503
229	U-185	229 S12 E49 34 5 USW H- 6 HTH	36.84689781	-116.4827423	H	4270.7	0.1		4002	0	8/2/84	4/6/99	37	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365049116285504
229	U-186	229 S12 E49 34 6 USW H- 6 HTH	36.84689781	-116.4827423	H	4270.7	0.1		4002	0	8/2/84	6/21/99	39	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365049116285505
229	U-196	229 S12 E49 35 1 USW H- 5 HTH	36.85603114	-116.46619447	H	4852	0.1		4000	0	11/19/82	4/1/99	25	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365122116275501
229	U-197	229 S12 E49 35 2 USW H- 5 HTH	36.85603114	-116.46619447	H	4852	0.1		4000	0	3/14/83	2/7/95	64	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365122116275502
229	U-198	229 S12 E49 35 3 USW H- 5 HTH	36.85603114	-116.46619447	H	4852	0.1		4000	0	3/14/83	6/1/99	84	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365122116275503
229	U-223	229 S12 E48 07ADD 1 Crater Flat 1a	36.91161381	-116.64561328	S	4080.9	0.1	300CCSM	700	1	9/18/88	9/24/04	157	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365445116383901
229	U-225	229 S12 E48 04DB 1 Daisy PW-2	36.92078078	-116.61366833	S	3920	20		2100	0	4/20/97	4/20/97	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365515116364601
229	U-226	229 S12 E48 04DBB 1 Crater Flat 1	36.92078073	-116.61644617	S	3930.9	0.1	120VLCC	1600	3	9/1/89	9/24/04	70	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365520116370301
229	U-242	229 S13 E48 21CAA 2 USW VH- 2	36.80585844	-116.57784108	H	3199.8	0.1		4000	3	4/27/83	4/27/83	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365821116343701
229	U-1635	229 S13 E49 16 1 USW H- 3 HTH	36.82831214	-116.46783038	H	4860	10		0	2			0	
229	U-1636	229 S12 E49 34 1 USW H- 6 HTH	36.84689781	-116.4827423	H	4269	10		0	1			0	
229	U-1661	229 S13 E48 27C 3 USW VH-1	36.79220348	-116.55271275	H	3161.1	0.1		0	3			0	

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
230	U-30	230 S15 E50 18CDBD1	36.64384226	-116.39671411	S	2662	5		507	0	3/8/55	3/8/55	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363840116233501

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
173A	U-551	173A S01 E51H19DB 1 Willow Witch Well	37.82077096	-116.76867419	T	5930	10		370	0	10/1/59	11/13/99	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375017115572201
173A	U-1364	173A S01 E53 28BDA 1 Deep Well	37.83271885	-116.01837576	M	5205	1		465	0	3/29/72	3/29/72	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374946115460101
173A	U-1370	173A N01 E53 32DB 1 NDOT	37.90132817	-116.0355989	M	5004	1		292	0	5/1/57	5/1/57	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375357115465101
173A	U-1372	173A N01 E53 27BBA 1 Last Stand Well	37.81077504	-116.00448637	M	4788	1		200	0	3/30/72	3/30/72	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375520115450301
173A	U-1374	173A N02 E52 24DC 1 USGS-MX	38.01743637	-116.07143401	M	4880	10		200	0	9/1/80	3/26/93	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375619116035301
173A	U-1377	173A N01 E53 07ADC 1 New Fred's Well	37.89438381	-116.04837697	S	4900	1		136	0	2/20/68	1/5/94	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375751116030201
173A	U-1378	173A N01 E53 03DAC 1 East Side Well	37.97513222	-115.99404274	T	4851	20		120	0	3/30/72	3/30/72	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375820115442301
173A	U-1379	173A N02 E52 35AC 1 USGS-MX	37.98049261	-116.089212	M	4970	20		200	0	3/1/81	3/1/81	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375850116051801
173A	U-1380	173A N02 E53 35AA 1 USGS-MX	37.99743754	-115.97365342	M	4990	100		200	0	9/1/80	1/1/81	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375951115582201
173A	U-1381	173A N02 E53 27DA 1 USGS-MX	38.00493709	-115.9922651	M	4865	100		150	0	9/1/80	3/15/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380018115592901
173A	U-1382	173A N02 E53 23CBC 1 Sunrise Well	38.01549247	-115.99032066	M	4892	1		180	0	3/29/72	3/29/72	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380059115441201
173A	U-1387	173A N02 E53 09BC 1 USGS-MX	38.05354702	-116.02476629	T	4856	80		200	0	9/1/80	9/4/91	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380313116012601
173A	U-1391	173A N03 E53 35BAC 1 Ed's Well	38.08382454	-115.98448749	M	4942	1		204	0	3/29/72	3/29/72	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380453115435601
173A	U-1393	173A N03 E52 36BB 1	38.08632398	-116.08087922	T	5110	20		71	0	11/9/73	11/9/73	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380511116044801
173A	U-1402	173A N03 E53 18BC 1 USGS-MX	38.12771218	-116.06226786	M	4990	10		200	0	3/1/81	3/15/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380740116034101
173A	U-1885	173A N01 E53 31CD 1	37.90077244	-116.06504411	U	0	0		0	1			0	
173A	U-1886	173A N01 E53 32CAA 1	37.90410585	-116.0397657	U	0	0		0	2			0	
173A	U-1888	173A N01 E53 07AD 1	37.96382656	-116.05087752	U	0	0		0	2			0	
173A	U-1890	173A N03 E53 35B 1	38.08326892	-115.98976543	U	0	0		0	2			0	

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
173B	U-597	173B N04 E55 19D 1	38.14937821	-117.08618876	F	5000	100		223	0	5/16/84	5/16/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380920116090501
173B	U-636	173B N05 E63 22CC 1 USBLM	38.52938838	-115.23307504	M	6220	10		10	0	3/21/90	3/21/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381624115403001
173B	U-637	173B N05 E54 24DCBA1	38.27326656	-115.90170764	M	4825	1		88	0	10/9/71	9/21/94	12	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381635115355701
173B	U-638	173B N05 E56 21ABCC2 USGS-MX	38.27493373	-115.85031689	F	4940	5		200	0	9/1/80	12/22/93	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381651115405901
173B	U-640	173B N05 E54 24DC 1	38.28076591	-116.28644244	M	4823	10		100	0	8/31/51	5/15/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381656115505701
173B	U-641	173B N05 E55 15CD 1	38.28215592	-115.85003915	T	4785	1		70	0	1/1/60	1/1/60	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381700115312901
173B	U-642	173B N05 E56 21AB 1 USGS-MX	38.28576771	-115.77586981	M	4960	20		200	0	9/1/80	9/1/80	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381709115404701
173B	U-646	173B N05 E54 14DB 1	38.29632364	-116.63617315	T	4813	3		560	0	3/8/90	3/8/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381805115520101
173B	U-656	173B N06 E54 34DB 1 USBLM - Pigeon Well	38.32800487	-115.22252029	S	4787	0		21	0	5/15/84	3/8/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381959115525701
173B	U-658	173B N06 E56 36CA 1 USGS-MX	38.33523014	-115.04362483	F	5100	20		150	0	9/1/80	1/1/81	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382009115374201
173B	U-661	173B N06 E56 27ACB 1	38.33937734	-116.31005458	M	4768	1		98	0	10/6/71	10/6/71	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382056115244101
173B	U-665	173B N06 E54 26AB 1 USGS - Abel Spring South	38.3530065	-115.09973792	F	4775	3		22	0	7/31/93	12/12/95	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382121115515601
173B	U-668	173B N06 E54 23BD 2 USGS-MX	38.35215549	-117.13397099	M	4790	3		200	0	1/1/81	9/21/94	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=382144115542601
173B	U-1409	173B N03 E54 05BC 1	38.15660154	-115.93281945	M	5040	1		325	0	11/1/48	11/1/48	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380906115410401
173B	U-1410	173B N03 E52 02DADB1 USGS-MX	38.15160058	-116.08560207	F	5005	5		452	0	8/25/80	7/16/91	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380906116050501
173B	U-1411	173B N03 E52 02DA 2 USGS-MX (S. R&R Valley)	38.15160058	-116.08560207	S	5010	10		495	0	8/15/80	9/14/04	51	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380906116050502
173B	U-1418	173B N04 E55 19DA 1	38.18826885	-115.82670477	M	5000	1		255	0	10/9/71	10/9/71	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381107115341101
173B	U-1422	173B N04 E54 24ABDC1 USGS-MX	38.20243494	-115.8483722	F	4950	20		200	0	9/1/80	3/1/81	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381146115442401
173B	U-1423	173B N04 E54 18DC 1	38.20660038	-115.9442089	M	4911	1		150	0	11/28/67	11/28/67	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381203115412001
173B	U-1427	173B N05 E55 34CDD 1	38.24243489	-115.77531402	M	4820	1		398	0	10/31/71	10/31/71	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381417115311801
173B	U-1428	173B N05 E55 35CDD 1	38.23965736	-115.75864675	M	4840	1		320	0	3/1/64	3/1/64	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381421115301501
173B	U-1429	173B N05 E55 33DDD 1	38.24299031	-115.78559217	M	4820	1		396	0	8/1/65	8/1/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381421115315501
173B	U-1430	173B N05 E55 34DDD 1	38.24132392	-115.76503587	M	4820	1		395	0	10/1/65	10/1/65	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381423115292201
173B	U-1431	173B N05 E55 36DAD 1	38.24549137	-115.73309031	M	4900	1		105	0	6/1/51	6/1/51	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381430115283901

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
173B	U-1433	173B N05 E55 35DCCC1	38.24104624	-115.75670223	M	4860	5		320	0	3/22/64	3/15/90	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381439116144401
173B	U-1435	173B N05 E55 35BDD 1	38.24993491	-115.75781336	M	4815	1		320	0	10/1/55	10/1/55	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381444115301201
173B	U-1436	173B N05 E55 34DCCC1	38.24937917	-115.77559179	F	4850	5		0	0	3/15/90	3/15/90	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381458115462901
173B	U-1437	173B N05 E55 32AB 1	38.25132279	-115.84670551	T	4808	0		0	0	5/16/84	5/16/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381505115504501
173B	U-1438	173B N05 E55 33BB 1	38.25243395	-115.84198312	T	4804	10		249	0	4/29/65	5/16/84	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381509115502801

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
227A	U-28	227A S15 E50 18CCAC2	36.6449534	-116.398936	S	2662	5		535	0	1/3/64	9/12/90	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363836116234001
227A	U-31	227A S15 E50 18CC 1	36.64439782	-116.39532517	M	2660	20		395	0	5/3/52	5/3/52	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363840116234001
227A	U-32	227A S15 E50 18CDC 1	36.6443978	-116.39810306	F	2670	30	111ALVF	505	0	2/28/55	2/28/55	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363840116235000
227A	U-33	227A S15 E50 18BBCD1	36.65189774	-116.40004768	S	2690	10		471	0	5/20/61	5/20/61	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363907116235701
227A	U-34	227A S15 E49 12 2 NC-EWDP- 4PB	36.65683657	-116.40474794	H	2700.62	0.5	100VLFL	849	0	2/11/00	8/17/03	44	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363925116241401
227A	U-35	227A S15 E49 12 1 NC-EWDP- 4PA	36.65682268	-116.40513407	H	2700.2	0.5	100VLFL	496	0	2/11/00	8/17/03	38	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363925116241501
227A	U-36	227A S15 E49 09 2 NC-EWDP- 2DB	36.66093056	-116.46604497	H	2628.9	0.5	300CRBN	2685	0	12/27/00	1/29/02	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363940116275501
227A	U-37	227A S15 E49 11ACD 1 NC-EWDP-Washburn-1X (brhl)	36.66410306	-116.42412106	H	2701.35	0.5	100VLFL	658	0	12/5/98	12/5/98	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363951116252401
227A	U-38	227A S15 E49 11ACD 2 NC-EWDP-Washburn-1X (deep)	36.66410306	-116.42412106	H	2701.35	0.5	100VLFL	510	0	1/16/99	8/17/03	91	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363951116252402
227A	U-39	227A S15 E49 11ACD 3 NC-EWDP-Washburn-1X (shlw)	36.66410306	-116.42412106	H	2701.35	0.5	100VLFL	353	0	1/16/99	4/27/00	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=363951116252403
227A	U-40	227A S15 E50 08 2 NC-EWDP- 5SB	36.66975057	-116.37694418	H	2752.82	0.5	100VLFL	499	0	2/11/00	8/17/03	65	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364011116223401
227A	U-41	227A S15 E49 07 1 NC-EWDP-15P	36.66979419	-116.49813253	H	2580.31	0.5	100VLFL	270	0	3/21/00	8/17/03	38	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364011116295001
227A	U-42	227A S15 E50 08BA 1 NC-EWDP- 5S	36.66987002	-116.37696363	H	2753.35	0.5	100VLFL	790	0	3/4/99	4/28/99	38	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364012116223401
227A	U-43	227A S15 E49 03 2 NC-EWDP-19D	36.67054452	-116.44900273	H	2686.65	0.5	100VLFL	1422	0	5/5/00	1/29/03	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364014116265301
227A	U-44	227A S15 E49 03CD 2 NC-EWDP-19IM2	36.67072508	-116.44877773	5	2688.39	5	100VLFL	950	0	1/29/03	8/17/03	8	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265201
227A	U-45	227A S15 E49 03 1 NC-EWDP-19P	36.67074174	-116.44886662	H	2687.5	0.5	100VLFL	469	0	3/21/00	8/17/03	32	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265301
227A	U-46	227A S15 E49 03CD 1 NC-EWDP-19IM1 (Zone 5)	36.67072508	-116.44899996	5	2687.61	5	120VLCC	938	0	11/14/01	7/9/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265302
227A	U-47	227A S15 E49 03CD 3 NC-EWDP-19IM1 (Zone 4)	36.67072508	-116.44899996	5	2687.61	5	100VLFL	938	0	11/14/01	7/9/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265303
227A	U-48	227A S15 E49 03CD 4 NC-EWDP-19IM1 (Zone 3)	36.67072508	-116.44899996	5	2687.61	5	100VLFL	938	0	11/14/01	7/10/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265304
227A	U-49	227A S15 E49 03CD 5 NC-EWDP-19IM1 (Zone 2)	36.67072508	-116.44899996	5	2687.61	5	100VLFL	938	0	11/14/01	7/10/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265305
227A	U-50	227A S15 E49 03CD 6 NC-EWDP-19IM1 (Zone 1)	36.67072508	-116.44899996	5	2687.61	5	100VLFL	938	0	11/14/01	7/10/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364015116265306
227A	U-56	227A S15 E50 06BA 1 NC-EWDP-23P (deep)	36.68476146	-116.39733689	5	2800.45	5	100VLFL	700	0	4/23/02	8/18/03	21	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364105116234701
227A	U-57	227A S15 E50 06BA 2 NC-EWDP-23P (shallow)	36.68476146	-116.39733689	5	2800.45	5	100VLFL	530	0	4/23/02	8/18/03	18	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364105116234702
227A	U-70	227A S14 E49 25CB 5 NC-EWDP-22S (Zone 4)	36.70420287	-116.41851025	5	2849.24	5	120VLCC	1185	0	7/25/02	6/17/03	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364215116250301
227A	U-71	227A S14 E49 25CB 6 NC-EWDP-22S (Zone 3)	36.70420287	-116.41851025	5	2849.24	5	100VLFL	1185	0	7/25/02	6/17/03	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364215116250302
227A	U-72	227A S14 E49 25CB 7 NC-EWDP-22S (Zone 2)	36.70420287	-116.41851025	5	2849.24	5	100VLFL	1185	0	7/25/02	8/7/03	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364215116250303
227A	U-73	227A S14 E49 25CB 8 NC-EWDP-22S (Zone 1)	36.70420287	-116.41851025	5	2849.24	5	100VLFL	1185	0	7/25/02	7/31/03	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364215116250304
227A	U-74	227A S14 E49 25CB 2 NC-EWDP-22PA (deep)	36.70436398	-116.41849359	5	2850.15	5	100VLFL	770	0	2/11/02	7/31/03	22	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364216116250301

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
227A	U-75	227A S14 E49 25CB 1 NC-EWDP-22PA (shallow)	36.70436398	-116.41849359	5	2850.15	5	100VLFL	600	0	2/11/02	7/31/03	22	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364216116250302
227A	U-76	227A S14 E49 25CB 3 NC-EWDP-22PB (deep)	36.70435009	-116.41829636	5	2850.15	5	100VLFL	1190	0	3/29/02	7/31/03	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364216116250303
227A	U-77	227A S14 E49 25CB 4 NC-EWDP-22PB (shallow)	36.70435009	-116.41829636	5	2850.15	5	100VLFL	990	0	3/29/02	7/31/03	16	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364216116250304
227A	U-100	227A S14 E49 13DD 2 NC-EWDP-10P (deep)	36.73024169	-116.40565728	5	2964.93	5	120VLCC	880	0	1/28/02	8/18/03	26	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364349116241701
227A	U-101	227A S14 E49 13DD 3 NC-EWDP-10P (shallow)	36.73024169	-116.40565728	5	2964.93	5	100VLFL	723	0	1/28/02	8/18/03	24	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364349116241702
227A	U-102	227A S14 E49 13DD 1 NC-EWDP-10S (Zone 2)	36.73009447	-116.40575728	5	2963.5	5	120VLCC	870	0	7/24/02	6/10/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364349116241801
227A	U-103	227A S14 E49 13DD 4 NC-EWDP-10S (Zone 1)	36.73009447	-116.40575728	5	2963.5	5	100VLFL	870	0	7/24/02	6/10/03	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364349116241802
227A	U-107	227A S14 E50 06A 3 J -12 WW	36.76488589	-116.39097095	H	3128.4	0.1		887	0	10/31/57	10/31/57	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364457116231201
227A	U-108	227A S14 E49 10DB 1 NC-EWDP-18P	36.75133298	-116.44731765	5	3164.86	5	120VLCC	885	0	11/9/01	8/18/03	22	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364505116264701
227A	U-110	227A S14 E50 06D 1 JF- 3 Well	36.75773044	-116.39032641	S	3098.3	0.1	120VLCC	1138	3	1/16/92	9/27/04	306	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364528116232201
227A	U-115	227A S14 E50 06A 1 J -12 WW	36.76488589	-116.39097095	H	3128.4	0.1	120VLCC	889	1	10/31/57	7/25/68	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364554116232400
227A	U-116	227A S14 E50 06A 2 J -12 WW	36.76488589	-116.39097095	H	3128.4	0.1	120VLCC	1139	10	8/24/68	9/27/04	253	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364554116232401
227A	U-139	227A S13 E51 31B 2 J -11 WW	36.78508911	-116.28587781	H	3442.8	0.1		1329	0	9/13/57	9/13/57	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364622116164301
227A	U-141	227A S13 E49 34 1 UE-25 WT 12	36.78206866	-116.43872036	H	3525.9	0.1	122TPPS	1264	8	9/1/83	6/17/99	164	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364656116261601
227A	U-142	227A S13 E51 31B 1 J -11 WW	36.78508911	-116.28587781	H	3442.8	0.1	120VLCC	1327	0	3/15/61	9/27/04	208	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364706116170601
227A	U-144	227A S13 E49 25 2 UE-25 WT 3	36.79924355	-116.41690016	H	3379.3	0.1	120VLCC	1125	1	6/7/83	6/23/99	98	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364757116245801
227A	U-147	227A S13 E49 22 1 UE-25 WT 17	36.80595437	-116.44137904	H	3687.7	0.1	120VLCC	1376	1	10/31/83	6/23/99	155	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364822116262601
227A	U-149	227A S13 E50 19C 2 J -13 WW	36.80802691	-116.39546322	H	3317.9	0.1	120VLCC	3488	0	12/30/62	1/1/63	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364828116234000
227A	U-150	227A S13 E50 19C 1 J -13 WW	36.80802691	-116.39546322	H	3317.9	0.1	120VLCC	3488	12	12/30/62	9/27/04	257	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364828116234001
227A	U-151	227A S13 E50 19C 3 J -13 WW	36.80802691	-116.39546322	H	3317.9	0.1	120VLCC	3488	0	1/1/63	3/31/64	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364829116234001
227A	U-156	227A S13 E49 15 1 USW WT-1	36.82113462	-116.4497851	H	3941.6	0.1	120VLCC	1665	0	6/29/83	6/16/99	175	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364916116265601
227A	U-160	227A S13 E49 14A 1 UE-25p 1 (Entire Well)	36.82720974	-116.4233007	H	3655.5	0.1		5923	0	11/7/83	11/7/83	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364938116252101
227A	U-161	227A S13 E49 14A 2 UE-25p 1 PTH (Lwr Intrvl)	36.82720974	-116.4233007	H	3655.5	0.1	300CRBN	5923	0	10/21/83	9/15/04	214	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364938116252102
227A	U-167	227A S13 E50 18B 1 UE-25 WT 13	36.82865159	-116.39844688	H	3387.5	0.1	122TPPS	1160	0	7/8/83	9/23/04	190	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364945116235001
227A	U-168	227A S13 E49 14 4 UE-25c 2 HTH	36.82908466	-116.42961765	H	3714.6	0.1	112TUFF	3000	0	3/18/84	3/18/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364945116254301
227A	U-169	227A S13 E49 14 1 UE-25c 1 HTH	36.82976243	-116.42945932	H	3709.3	0.1	112TUFF	2961	4	11/7/83	6/16/99	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254300
227A	U-170	227A S13 E49 14 2 UE-25c 2 HTH	36.82908466	-116.42961765	H	3714.6	0.1	112TUFF	3000	3	3/18/84	10/24/85	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254301
227A	U-171	227A S13 E49 14 3 UE-25c 3 HTH	36.8292541	-116.42988711	H	3714.9	0.1	112TUFF	3000	2	5/2/84	5/2/84	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254302

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
227A	U-172	227A S13 E49 14 7 UE-25c 2	36.82908466	-116.42961765	H	3714.5	0.01		3000	3	9/13/89	2/5/98	13	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254401
227A	U-173	227A S13 E49 14 8 UE-25c 3	36.8292541	-116.42988711	H	3715.26	0.01		3000	13	8/29/89	6/28/98	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254501
227A	U-174	227A S13 E49 14 5 UE-25c 3	36.8292541	-116.42988711	H	3715	10		3000	0	8/29/89	9/10/90	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254502
227A	U-175	227A S13 E49 14 6 UE-25c 3	36.8292541	-116.42988711	H	3715	10		3000	0	2/22/90	12/3/90	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254503
227A	U-177	227A S13 E49 10 4 USW WT-2	36.83960649	-116.45593554	H	4269.4	0.1	120VLCC	2040	0	7/20/83	5/20/99	96	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365023116271801
227A	U-178	227A S13 E49 12 1 UE-25 WT 14	36.8422374	-116.41051975	H	3531.5	0.1	120VLCC	1303	0	10/21/83	6/17/99	170	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365032116243501
227A	U-179	227A S13 E49 10 3 USW H- 4 HTH	36.84229262	-116.44913805	H	4096.1	0.1		4000	0	9/17/82	12/30/82	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365032116265401
227A	U-180	227A S13 E49 10 13 USW H-4 HTH	36.84229262	-116.44913805	H	4096.1	0.1		4000	0	3/18/83	3/31/99	38	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365032116265402
227A	U-181	227A S13 E49 10 14 USW H-4 HTH	36.84229262	-116.44913805	H	4096.1	0.1		4000	0	3/18/83	6/16/99	55	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365032116265403
227A	U-187	227A S12 E50 31 9 UE-25a 1	36.85122311	-116.4407739	H	3934.4	0.1	120VLCC	2501	0	11/9/82	4/29/85	40	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365105116262401
227A	U-191	227A S12 E50 31 12 UE-25b 1 HTH	36.85216476	-116.44054612	H	3939.3	0.1	120VLCC	4002	0	11/10/81	12/3/83	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365108116262301
227A	U-192	227A S12 E50 31 10 UE-25b 1 HTH	36.85216476	-116.44054612	H	3939.3	0.1		4002	0	5/23/83	7/18/95	38	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365108116262302
227A	U-193	227A S12 E50 31 11 UE-25b 1 HTH	36.85216476	-116.44054612	H	3939.3	0.1		4002	0	3/18/83	6/11/98	70	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365108116262303
227A	U-194	227A S12 E49 36 11 USW G-4	36.85373408	-116.45193828	H	4165	0.1	120VLCC	3003	0	3/25/83	1/26/90	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365114116270401
227A	U-195	227A S12 E50 33A 1 UE-25 WT 15	36.85446792	-116.3947692	H	3553.8	0.1	122TPPS	1360	0	11/29/83	9/27/04	282	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365116116233801
227A	U-200	227A S12 E50 30 1 UE-25 WT 4	36.86113134	-116.43496819	H	3836	0.1	120VLCC	1567	0	6/8/83	6/17/99	180	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365140116260301
227A	U-201	227A S12 E51 29 1 UE-25a 3	36.86306297	-116.31565758	H	4546	1		2530	0	12/19/79	12/19/79	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365147116185301
227A	U-202	227A S12 E49 25 1 USW H- 1 HTH	36.86595331	-116.45427739	H	4274.9	0.1		6000	0	2/26/81	6/24/82	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365157116271201
227A	U-203	227A S12 E49 25 11 USW H-1 HTH	36.86595331	-116.45427739	H	4274.9	0.1		6000	0	7/8/82	6/15/99	122	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365157116271202
227A	U-204	227A S12 E49 25 12 USW H-1 HTH	36.86595331	-116.45427739	H	4274.9	0.1		6000	0	7/8/82	6/15/99	117	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365157116271203
227A	U-205	227A S12 E49 25 13 USW H-1 HTH	36.86595331	-116.45427739	H	4274.9	0.1		6000	0	7/8/82	6/15/99	88	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365157116271204
227A	U-206	227A S12 E49 25 14 USW H-1 HTH	36.86595331	-116.45427739	H	4274.9	0.1		6000	0	7/8/82	6/15/99	89	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365157116271205
227A	U-207	227A S12 E49 25 10 USW G-1	36.86663658	-116.45901927	H	4350.1	0.1		6000	0	3/23/82	3/23/82	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365200116272901
227A	U-208	227A S12 E49 25 2 UE-25 WT 18	36.86844501	-116.44583539	H	4384.5	0.1	120VLCC	1965	0	1/26/90	8/30/95	48	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365207116264201
227A	U-209	227A S12 E50 19 1 UE-25 WT 16	36.87734505	-116.426868	H	3972.8	0.1	120VLCC	1674	0	11/22/83	6/7/99	139	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365239116253401
227A	U-213	227A S12 E49 24 1 USW WT-24	36.88356135	-116.45449702	S	4900.29	0.5		0	0	7/14/98	6/24/99	7	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365301116271301
227A	U-214	227A S12 E49 13 2 USW G- 2	36.88950564	-116.46065289	H	5098.1	0.1	120VLCC	6006	4	11/10/81	6/22/99	44	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365322116273501
227A	U-217	227A S12 E49 13 1 UE-25 WT 6	36.89429459	-116.44689402	H	4313.6	0.1	120VLCC	1221	0	9/7/83	6/7/99	137	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365340116264601

USGS Data- Wells (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude (ft-AMSL)	Altitude Accuracy	Aquifer Code	Well Depth (ft)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
227A	U-233	227A S11 E50 34 2 USW UZN 91	36.94000857	-116.37552475	H	3949.34	0.01	122TVCN	94	0	1/21/86	9/26/97	218	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=3656 24116222901
227A	U-234	227A S11 E50 34 1 UE-29a 1 HTH	36.94125579	-116.37471917	H	3984.2	0.01		215	1	6/21/82	9/26/97	219	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=3656 29116222601
227A	U-235	227A S11 E50 34 3 UE-29a 2 HTH	36.94129745	-116.3748164	H	3984.64	0.01	120VLCC	1165	0	6/21/82	9/26/97	219	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=3656 29116222602
227A	U-241	227A S13 E49 25 1 UE-25 WT 3	36.79924355	-116.41690016	H	3379.3	0.1		1142	0	10/31/83	10/31/83	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=3657 57116245801
227A	U-1611	227A S14 E49 26 1 UE-25p 1 PTH	36.82720974	-116.4233007	H	3668	10		0	1			0	
227A	U-1638	227A S12 E50 31 1 UE-25b 1 HTH	36.85216476	-116.44054612	H	3929	10		0	39			0	

USGS Data- Springs and Streams (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude	Altitude Accuracy	Water Quality Begin	Water Quality End	Water Quality Data Count	Daily Flow Start	Daily Flow End	Daily Flow Data Count	Peak Flow Data Count	Site Data (Flow / Water Quality)
146	SPR-1741	146 S11 E44 24AC 1 Woodcamp Spring	36.96910787	-116.97811928	F			3/16/1993	3/16/1993	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365809116583801
149	SPR-1790	149 N02 E49 32AC 1 Spring	37.98188131	-116.5175558	U			7/28/1967	7/28/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375855116310001
149	SPR-1794	149 N02 E47 14AC 1 Spring	38.02771415	-116.68144943	U			7/28/1967	7/28/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380140116405001
149	SPR-1795	149 N02 E49 13AAD 1 Spring	38.03049172	-116.44255433	U			7/29/1967	7/29/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380150116263001
149	SPR-1800	149 N03 E49 14 1 Spring	38.11382449	-116.46199976	U			7/29/1967	7/29/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380650116274001
149	SPR-1802	149 N03 E48 06AB 1 Spring	38.14438002	-116.64256033	U			7/28/1967	7/28/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380840116383001
149	SPR-1804	149 N04 E47 29 1 Spring	38.17215752	-116.73700772	U			7/27/1967	7/27/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381020116441001
149	SPR-1805	149 N04 E46 26CA 1 Spring	38.17215733	-116.79256545	U			7/30/1967	7/30/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381020116473001
149	SPR-1816	149 N04 E48 08BC 1 Spring	38.21660174	-116.63700514	U			5/10/1967	7/27/1967	4			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381300116381001
149	SPR-1817	149 N04 E47 10AAA 1 Spring	38.21799056	-116.69534021	U			7/27/1967	7/27/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381305116414001
149	SPR-1821	149 N05 E46 33CD 1 Spring	38.2388234	-116.83145661	U			7/30/1967	7/30/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381420116495001
149	SPR-1823	149 N05 E46 28DC 1 Spring	38.25271224	-116.82590098	U			7/30/1967	7/30/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381510116493001
149	SPR-1824	149 N05 E47 26CC 1 Spring	38.25549033	-116.68978488	U			7/27/1967	7/27/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381520116412001
149	SPR-1836	149 N05 E47 13CA 1 Spring	38.28604586	-116.66756275	U			7/28/1967	7/28/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381710116400001

USGS Data- Springs and Streams (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude	Altitude Accuracy	Water Quality Begin	Water Quality End	Water Quality Data Count	Daily Flow Start	Daily Flow End	Daily Flow Data Count	Peak Flow Data Count	Site Data (Flow / Water Quality)
156	STR-2146	Hot Creek near Warm Springs, NV	38.19576634	-116.17171624	U						9/1/1967	12/10/1972	1928		http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10247050
156	STR-2165	Big Creek nr Warm Springs, NV	38.18688086	-115.755869	S	5630	20				4/1/1991	9/30/1994	1279	4	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10247200
156	SPR-1778	156 N01 E50 10DDD 1 Spring	37.9443816	-116.36477424	U			8/2/1967	8/2/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375640116215000
156	SPR-1784	156 N01 E50 06 3 Big Seep	37.95993702	-116.43199811	U	7270		4/1/1986	4/1/1986	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375736116255202
156	SPR-1787	156 N01 E49 01 1 Ledge Spring	37.96160368	-116.44144278	U	7650		9/29/1987	6/9/1992	12			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375742116262600
156	SPR-1791	156 N02 E50 28ACC 1 Spring	37.99438076	-116.38699728	U			8/2/1967	8/2/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375940116231000
156	SPR-1792	156 N02 E50 21C 1 Spring	38.00826949	-116.39255307	U			8/2/1967	8/2/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380030116233000
156	SPR-1806	156 N04 E50 20CCC 1 Spring	38.18326758	-116.37588754	U			5/11/1967	8/1/1968	5			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381100116223000
156	SPR-1807	156 N04 E50 20CDC 1 Hot Sp, near Warm Springs	38.18743418	-116.37338753	U			1/1/1974	7/31/2003	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381115116222101
156	SPR-1808	156 N04 E50 20CB 1 Warm Springs	38.18743418	-116.37366532	U	5580		9/21/1973	9/21/1973	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381115116222201
156	SPR-1809	156 N04 E50 20CBC 1 Spring	38.18882308	-116.37588759	U			8/3/1967	8/3/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381120116223000
156	SPR-1811	156 N04 E51 13DA 1 Spring	38.20409953	-116.17727205	U			5/11/1967	8/2/1967	4			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381215116103500
156	SPR-1822	156 N04 E49 01BB 1 Spring	38.24021183	-116.41199976	U			7/31/1967	7/31/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381425116244000
156	SPR-1837	156 N05 E51 07BC 1 Spring	38.30548813	-116.28283147	U			7/13/1968	7/13/1968	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381820116165500
156	SPR-1859	156 N07 E50 19DCC 1 Spring	38.44576662	-116.34811228	U			8/2/1967	8/2/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382645116205000
156	SPR-1860	156 N07 E51 19D 1 Spring	38.44993257	-116.16199541	U			5/11/1967	7/31/1968	3			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382700116094000
156	STR-1693	156 N01 E50 06 5 Lost Hammer	37.96077033	-116.42616465	U	7070		9/24/1985	9/24/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375739116253100
156	STR-1781	156 N01 E50 06 7 Kawich Creek nr Antler	37.95854814	-116.42810913	U	7160		1/19/1985	3/20/1986	5			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375731116253800
156	STR-1782	156 N01 E50 06 1 Kawich Creek ab weir	37.959937	-116.42560908	U	7070		4/3/1985	4/8/1992	17			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375736116252900
156	STR-1783	156 N01 E50 06 2 Kawich Creek nr Big Seep	37.95993702	-116.43199811	U	7270		7/10/1985	9/17/1992	26			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375736116255201
156	STR-1799	156 N03 E50 13BCC 1 Stream-Reveille V Ertec	38.10826812	-116.33949728	U	5482		3/30/1981	4/4/1981	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380630116201901
156	STR-2147	156 N01 E49 12 1 Kawich Creek nr Warm Spgs	37.95132608	-116.45144296	U	7000					9/24/1988	5/21/1990	605		http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375705116270200
156	STR-2148	156 Kawich Creek nr Warm Spgs - 21x weather data	37.96021477	-116.42394237	U	7000					3/1/1987	9/30/1991	1319		http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375737116252301

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170	STR-2166	Penoyer Valley tr nr Tempiute, NV	37.58523056	-115.68086573	U	5480					10/1/1965	9/30/1977	4383	18	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10247860
170	SPR-2046	170 N01 E56 35DD 1 Spring	37.89855736	-115.64614465	U			9/14/1968	9/14/1968	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375355115384331
172	SPR-2051	172 N02 E57 07 1 Spring	38.04994455	-115.61253275	U			7/31/1985	7/31/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380300115364201
172	SPR-2055	172 N03 E57 08 1 Spring above Adaven	38.13466559	-115.60030934	U			7/31/1985	7/31/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380805115355801
172	SPR-2057	172 N04 E56 35 1 Lower Little Cherry Cr Sp	38.16716289	-115.65419943	U			7/31/1985	7/31/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=381002115391201
173A	SPR-1770	173A S02 E51 21 2 Spring	37.7499411	-116.28421524	U			8/1/1967	8/1/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=374500116170001
173A	SPR-1777	173A N01 E52 22CBC 1 Spring	37.9316047	-116.11865686	U			8/3/1967	8/3/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375554116070401
173A	SPR-1793	173A N02 E52 19BA 1 Spring	38.0277135	-116.16754785	U			8/3/1967	8/3/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380140116100001
173A	SPR-1796	173A N02 E51 02D 1 Spring	38.04715751	-116.19532659	U			8/3/1967	8/3/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380250116114001
173B	SPR-1843	173B N06 E54 24CA 1 Spring	38.36382212	-115.84948406	U			9/12/1968	9/12/1968	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382150115505501
173B	SPR-1850	173B N06 E54 11C 1 Spring	38.38882189	-115.87031828	U			8/7/1967	8/7/1967	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382320115521001
181	SPR-2049	181 N01 E63 28CC 1 Black Rock Spring	37.91190416	-114.91889988	F	5520	20	3/22/1988	3/22/1988	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375443114550501
203	SPR-2086	203 S02 E67 07CD 1 Spring	37.78413102	-114.5288833	U	5275		4/10/1985	4/10/1985	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=374703114314101
203	SPR-2088	203 S02 E68 04BAD 1 Panaca Spring	37.80663092	-114.38054445	U	4768	20	4/8/1985	11/11/1986	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=374824114224701
203	SPR-2089	203 S02 E63 04BADD1 Panaca Spring	37.80718647	-114.38137782	U	4778		4/26/1984	4/26/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=374826114225001
203	SPR-2098	203 S01 E66 26 1 Lime Spring	37.91440734	-114.54110644	U	6880		4/7/1985	4/7/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=375452114322501
204	SPR-2069	204 S06 E69 28 1 Spring	37.40052368	-114.27776002	U			6/3/1985	6/3/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=372402114163701
204	SPR-2071	204 S05 E67 23 1 Spring	37.49913182	-114.45332378	U			6/3/1985	6/3/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=372957114270901
204	SPR-2074	204 S04 E67 08A 1 Caliente Mineral Hot Spr	37.61302031	-114.51249339	U	4400		2/4/1974	2/4/1974	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=373647114304201
204	SPR-2082	204 S04 E67 08B 2 Spring	37.62107588	-114.51027109	U	4430		4/10/1985	4/10/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=373716114303401
204	STR-2170	Mathews Canyon Wash nr Caliente, NV	37.49857894	-114.2230361	U	5409.1					6/1/58	9/30/84	9619	26	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=9418200
204	STR-2171	Pine Canyon Wash nr Caliente, NV	37.47809722	-114.30746389	U	5595					6/1/58	9/30/84	9619	25	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=9418300

USGS Data- Springs and Streams (CRC Basins)

Basin No.	Project ID	Site_Name	Latitude	Longitude	Coordinate Accuracy	Altitude	Altitude Accuracy	Water Quality Begin	Water Quality End	Water Quality Data Count	Daily Flow Start	Daily Flow End	Daily Flow Data Count	Peak Flow Data Count	Site Data (Flow / Water Quality)
207	SPR-1840	207 N06 E60 25BDAD1 Moon River Springs	38.35161611	-115.18168532	U	5220	5	4/27/1982	4/27/1982	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382105115104801
207	SPR-1841	207 N06 E60 25BDAD2 Moon River Spring	38.35161612	-115.18140753	U	5220		1/18/1984	1/18/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382106115105001
207	SPR-1846	207 N06 E58 20 1 Big Spring - Grant Range	38.37049681	-115.48197084	U			7/24/1985	7/24/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382214115285201
207	SPR-1847	207 N06 E59 18DAA 1 Forest Home Spring	38.37744394	-115.37613499	U			7/24/1985	7/24/1985	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382239115223101
207	SPR-1848	207 N06 E61 18AADA1 NDW - Hot Creek Spring	38.38300476	-115.15335081	U	5225	5	7/19/1981	1/18/1984	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382259115090801
207	SPR-1856	207 N07 E62 33BCCC1 Flag Spring 3	38.42133994	-115.02306846	F	5290	5	1/17/1984	1/17/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382517115012001
207	SPR-1858	207 N07 E62 28ABDC1 Butterfield Spring	38.43967317	-115.01167918	U	5320	5	7/19/1981	1/17/1984	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=382624115004001

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227A	STR-1647	227A S12 E50 03DA 1 Delirium Can. at mouth	36.92022829	-116.37560512	S			1/26/1995	1/26/1995	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365513116222901
227A	STR-1648	227A Delirium Canyon overland flow site	36.92328386	-116.37088273	S	4040	10	1/5/1995	1/5/1995	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365524116221201
227A	STR-1649	227A Overland flow site near Pah Canyon	36.94078354	-116.37782763	S	4000	10	1/6/1995	1/26/1995	4			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365627116223701
227A	STR-1653	Yucca Wash nr Mouth, Nevada Test Site, NV	36.86606219	-116.39477209	S	3590	10	1/18/1993	1/26/1995	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10251252
227A	STR-1654	Pagany Wash Number 1, NTS, NV	36.86078411	-116.43644047	S	3860	10	12/7/1992	12/7/1992	1	10/1/1992	9/30/1995	1095	2	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=102512533
227A	STR-1655	Wren Wash at Yucca Mtn, NTS, NV	36.85939507	-116.45505236	S	4220	10	1/25/1995	1/25/1995	1	8/24/1994	9/30/1995	403	3	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=1025125356
227A	STR-1656	Split Wash below Quac Canyon Wash, NTS, NV	36.84911751	-116.44921868	S	4180	10	1/25/1995	1/25/1995	1	9/10/1993	9/30/1995	751	3	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=102512537
227A	STR-1670	227A S14 E50 06 1 40-Mile Wash at J-12	36.76411922	-116.39449332	U			8/14/1984	8/14/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=364551116233700
227A	STR-1703	227A S13 E50 30 1 Busted Butte Wash	36.79689649	-116.39838269	U			8/14/1984	8/14/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=364749116235100
227A	STR-1708	227A S13 E50 18 1 40-Mile Wash at Road H	36.81772953	-116.39727173	U			8/15/1984	8/15/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=364904116234700
227A	STR-1709	227A 40-mile Wash above Drill Hole Wash	36.81884063	-116.39699395	U			8/14/1984	8/14/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=364908116234600
227A	STR-1710	227A S13 E50 18 2 Drill Hole Wash at Mouth	36.81967394	-116.39866069	U			8/14/1984	8/14/1984	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=364911116235200
227A	STR-1725	227A Overland flow site in Fortymile Canyon	36.88883971	-116.38838314	S	3760	10	1/24/1995	1/24/1995	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365320116231501
227A	STR-2137	Fortymile Wash at Narrows, NTS, NV	36.88689536	-116.38143838	S	3680	10				9/21/1983	9/30/1997	5124	8	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10251250
227A	STR-2138	Pagany Wash near the Prow, NTS, NV	36.86828388	-116.44810771	S	4280	10				8/26/1994	9/30/1995	401	1	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=102512531
227A	STR-2140	Drillhole Wash above Well UZ-1, NTS, NV	36.86578383	-116.45783032	S	4310	10				8/25/1994	9/30/1995	402	3	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=102512535
227A	STR-2143	Split Wash at Antler Ridge, NTS, NV	36.84328434	-116.44144051	S	3870	10				9/9/1993	9/30/1995	752	3	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=1025125372
227A	STR-2144	Fortymile Wash nr Well J-13, NTS, NV	36.80745188	-116.40116068	S	3240	10				11/30/1983	9/30/1997	5054	7	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10251255
227A	STR-2145	FORTYMILE WASH NR AMARGOSA VALLEY, NV	36.67161961	-116.43504939	S	2705	5				11/15/1983	9/30/1997	5069	20	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10251258

USGS Data- Springs and Streams (CRC Basins)

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228	STR-2129	Beatty Wash near Beatty, NV	36.9435565	-116.72005984	F	3460	20				10/1/1988	9/30/1995	2556	5	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10251215
228	STR-2130	AMARGOSA RIVER AT BEATTY, NV	36.91050109	-116.75728212	S	3300	20				8/27/1993	9/30/2003	1936	7	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10251217
228	SPR-1645	228 S12 E47 06DDD 1 Revert Springs Channel	36.91522327	-116.75228215	S	3340	20	12/17/1996	12/17/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365455116450501
228	SPR-1646	228 S12 E47 05CA 1 Revert Springs Area	36.91744554	-116.74561541	F	3370	25	12/18/1996	12/18/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365503116444101
228	SPR-1735	228 S11 E46 26DCC 1 Lower Indian Springs	36.94466652	-116.79672776	F	4025	25	5/22/1997	5/22/1997	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365628116473801
228	SPR-1737	228 S11 E46 26CB 1 Upper Indian Springs	36.95133292	-116.80506133	F	4220	20	5/22/1997	5/22/1997	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365635116480201
228	SPR-1738	228 S11 E47 33BA 1 Spring	36.94216751	-116.72867111	S	3470	20	12/17/1996	12/17/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365636116430801
228	SPR-1739	228 S11 E46 26DDC 1 Lower Indian Spring	36.94411097	-116.79700553	S	4020	20	12/18/1996	12/18/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365639116474601
228	SPR-1743	228 S11 E47 21 1 Spring	36.97272256	-116.72033819	U	3600		2/5/1974	2/5/1974	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365822116431001
228	SPR-1744	228 S11 E47 16DCD 4 Hot Springs Bath House 1	36.9741114	-116.72200492	S	3590	20	12/18/1996	12/18/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365825116431501
228	SPR-1745	228 S11 E47 16DCD 5 Hot Springs Bath House 2	36.97383363	-116.72200492	S	3590	20	12/18/1996	12/18/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365825116431502
228	SPR-1747	228 S11 E47 16DCDB3 Hot Springs Bath House 1	36.9741114	-116.72200492	F	3600	20	9/27/1996	12/18/1996	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365827116431601
228	SPR-1750	228 S11 E47 03CDB 1 Oleo Rd Spring	37.00549982	-116.70950525	S	3830	10	12/17/1996	12/17/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=370020116423101
228	SPR-1753	228 S10 E47 28DCD 1 OVU Culvert Spring	37.03272111	-116.72256171	S	3770	10	12/17/1996	12/17/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=370158116431801
228	STR-1740	228 S11 E47 28DDA 1 Ute Springs Culvert	36.94772312	-116.71755987	S	3450	20	12/17/1996	12/17/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365652116430001
228	STR-1746	228 S11 E47 16DCD 6 Hot Springs blw Culvert 1	36.97355586	-116.72144934	S	3590	20	12/18/1996	12/18/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365826116431501
228	STR-1749	228 S11 E47 21AAA 1 Hot Springs Culvert 2	36.97300032	-116.72117155	S	3585	20	12/18/1996	12/18/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365844116431201
228	STR-1752	228 S11 E47 04BAC 1 Springdale Culvert	37.01438818	-116.72728365	S	3695	10	12/17/1996	12/17/1996	1			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=370052116433501
229	SPR-1722	229 S12 E48 30BB 1 Specie Spring	36.86800335	-116.65922393	F	4400	20	12/18/1996	12/18/1996	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365205116393001
229	SPR-1723	229 S12 E48 30BBC 1 Specie Spring	36.86855889	-116.65977951	S	4400	20	5/21/1997	5/22/1997	2			0	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=365207116393201

Appendix B

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	137A		141		142		143		144		145	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM									168			
CON												
DOM							24					
ENV												
IND			117									
IRC												
IRD	160											
IRR	10,143		32		16							
MM	8,331				1,337		23,231		30			
MUN	1,507		1,554		326		154					
PWR												
QM	14		36				435					
REC												
STK	924		132		29		39		28		12	
STO												
WLD												
OTH												
Total	21,079	0	1,871	0	1,708	0	23,882	0	226	0	12	0
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST												
RES												
APP												
RFA	907											
PER	3,665	45	865		564		20,972		169			
RLP												
RVP												
CER	17,370		1,006		1,088	56	2,729	181	57		12	
DEC												
Total	21,941	45	1,871	0	1,652	56	23,701	181	226	0	12	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

Reproduced from NDWR Water Rights Database (Run date: 12[illegible]2004)

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	146		147		148		149		155c		156	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM												
CON												
DOM							2				2	
ENV												
IND											43	
IRC								5,120				5,920
IRD											1,184	5,280
IRR	3,222						7,510				2,817	
MM	162										6	
MUN												
PWR												
QM	125		380		243		1,183				6	
REC												
STK	76		34		7		269		17		161	
STO												
WLD												
OTH												
Total	3,586	0	414	0	250	0	8,964	5,120	17	0	4,220	11,200
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST							74				23	
RES												
APP												
RFA							5,120				11,200	
PER	2,481		362				4,909				1,637	
RLP												
RVP												
CER	1,104		52		250		3,982		17		2,560	
DEC												
Total	3,586	0	414	0	250	0	14,084	0	17	0	15,420	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	157		158A		159		160		169A		170	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM											64	608
CON												
DOM												
ENV												
IND												
IRC												3,200
IRD												
IRR											11,746	
MM												
MUN												
PWR												
QM											2,540	
REC												
STK			12						7		111	
STO												
WLD												
OTH												
Total	0	0	12	0	0	0	0	0	7	0	14,461	3,808
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST												
RES												
APP												
RFA											3,809	
PER											3,229	
RLP												
RVP												
CER			12						7		11,231	
DEC												
Total	0	0	12	0	0	0	0	0	7	0	18,269	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

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(Run date: 12/[illegible]004)

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	171		172		173A		173B		180		181	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM							2					
CON												
DOM												
ENV												
IND							72					
IRC				3,200				83,080				
IRD							4,800	23,040				
IRR			415		3,677		19,523					
MM							69				18	
MUN				11,584				95,568				11,584
PWR												
QM							0					
REC							1,994					
STK	38		39		205	23	172	7	35		38	
STO												
WLD												
OTH					9							
Total	38	0	454	14,784	3,890	23	26,633	201,695	35	0	57	11,584
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST												
RES												
APP												
RFA			14,784		46		201,695				11,584	
PER	6		88		4		7,061		22			
RLP												
RVP												
CER	32		366		3,886		19,572		13		57	
DEC												
Total	38	0	15,238	0	3,936	0	228,328	0	35	0	11,640	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

Reproduced from NDWR Water Rights Database (Run date: 12/15/2004)

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	182		196		197		198		199		200	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM												
CON												
DOM												
ENV												
IND												
IRC												
IRD												
IRR							7,031		1,661		421	
MM					65							
MUN												
PWR												
QM											4	
REC							10					
STK	7		388		6		7					
STO												
WLD												
OTH			9									
Total	7	0	397	0	71	0	7,048	0	1,661	0	425	0
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST			10	10								
RES												
APP												
RFA							28					
PER					65		11				140	
RLP												
RVP												
CER	7		377		6		7,036		1,661		285	
DEC												
Total	7	0	387	10	71	0	7,075	0	1,661	0	425	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

Reproduced from NDWR Water Rights Database (Run date: 12[illegible]004)

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	201		202		203*		204		205		206	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM					1,426				1,103			
CON												
DOM							905		104			
ENV									40			
IND									4,300	260		
IRC												
IRD			2,285		2,039				140			
IRR	978	1,320	1,611	3,520	24,246		3,042		10,512			
MM			490		3,871				6			
MUN			1,536	23,167	1,344				7,539	2,875		
PWR												
QM	10		4		40		502		4			
REC							181					
STK			46		23		99		11			
STO												
WLD			1		1							
OTH					421		306		65			
Total	988	1,320	5,973	26,687	33,410	0	5,034	0	23,825	3,135	0	0
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST												
RES												
APP					75							
RFA	1,320		26,687		279				8,679			
PER			275		6,301		2,248		5,862			
RLP					1,699							
RVP												
CER	988		5,211	487	19,769	3,871	2,480		17,962			
DEC					398		306					
Total	2,308	0	32,173	487	28,521	3,871	5,034	0	32,503	0	0	0
					Geothermal (PERM) =	1,371.80						
					* Has note been supplementally adjusted							

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

Reproduced from NDWR Water Rights Database (Run date: 12/15/2004)

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	207		208		209		221		222		225	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM					238				134			
CON												
DOM												
ENV												
IND												
IRC		41,760										
IRD	1,783	50,240										
IRR	27,249	1,561			6,842	20,428			591			
MM											9	
MUN					874		2,100		11,546	185,340		
PWR												
QM	54				1							
REC	14								14			
STK	681	167	30		61		4		93			
STO												
WLD					1,126							
OTH												
Total	29,781	93,728	30	0	9,141	20,428	2,104	0	12,378	185,340	9	0
Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST					48				27	1		
RES												
APP												
RFA	93,728				22,115				185,340			
PER	11,064		22		2,211		2,100		134		9	
RLP												
RVP												
CER	18,717		7		6,881		4		12,216			
DEC												
Total	123,509	0	30	0	31,256	0	2,104	0	197,717	1	9	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

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Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	226		227A		227B		228		229		230	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM			25				11				1,248	6
CON												
DOM			16								3	
ENV												
IND				5					430			
IRC												
IRD											2,312	
IRR							75	200			18,161	800
MM							1		1,085	46	1,631	27,068
MUN							1,163				877	
PWR												
QM											593	2,856
REC							50					
STK			17				2					
STO												
WLD											9	
OTH												
Total	0	0	58	5	0	0	1,301	200	1,516	46	24,834	30,730

Status	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW	*Annual Duty	Other GW
VST												
RES												
APP			5								22	
RFA							200		46		32,529	
PER							1,220		860		6,988	
RLP												
RVP												
CER			58				81		656		17,847	
DEC												
Total	0	0	63	0	0	0	1,501	0	1,562	0	57,385	0

Notes: *Annual Duty may not include all Decreed and Adjudicated appropriations.

Reproduced from NDWR Water Rights Database (Run date: 12/15/2004)

Hydrographic Basin Summary - By Manner of Use for Groundwater Sources (Study Corridor Basins)

Basin No.	231		232	
Manner of Use	*Active Annual Duty	Pending Annual Duty	*Active Annual Duty	Pending Annual Duty
COM				
CON				
DOM				
ENV				
IND				
IRC				
IRD				
IRR			11	
MM			228	
MUN				
PWR				
QM				
REC				
STK	12		9	
STO				
WLD				
OTH				
Total	12	0	248	0
Status	*Annual Duty	Other GW	*Annual Duty	Other GW
VST				
RES				
APP				
RFA				
PER				
RLP				
RVP				
CER	12		237	11
DEC				
Total	12	0	237	11

Notes: *Annual Duty may not include all Decreed and A[illegible]licated appropriations.

Reproduced from NDWR Water Rights Database
(Run date: 12[illegible]004)

Water Rights Abstract Reports

Appendix C

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
141	V05126		5/29/1990	VST	SPR	NE	NE	4N 45E 32	0.010	STK		0	0.51	MGS	NY
141	V05125		5/29/1990	VST	SPR	NE	NE	4N 45E 30	0.010	STK		0	0.51	MGS	NY
141	54326	15434	1/11/1990	CER	SPR	NW	NW	4N 45E 07	0.005	STK		0	0.82	MGS	NY
141	54324	15432	1/11/1990	CER	SPR	SW	NE	4N 44E 13	0.003	STK		0	0.71	MGS	NY
141	54323	15431	1/11/1990	CER	SPR	NW	NW	4N 44E 12	0.005	STK		0	0.82	MGS	NY
141	7929	8512	11/12/1926	CER	OSW	SE	SE	4N 44E 31	0.060	STK		0	9.72	MGS	NY
141	6189	1035	6/29/1920	CER	SPR	NW	NW	4N 44E 12	0.010	STK		0	2.38	MGS	NY
149	V01564		5/18/1918	VST	SPR	NE	NW	6N 47E 01	0.000	STK		0	0.06	MGS	NY
170	55322	14606	9/25/1990	CER	SPR	NW	NE	5S 53E 17	0.006	WLD		0	1.46	MGA	NY
170	55321	14605	9/25/1990	CER	SPR	SW	SW	5S 53E 08	0.010	WLD		0	2.92	MGA	NY
181	V01297		2/21/1914	VST	SPR	SW	SE	4N 65E 30	0.000	IRR		0.4	1.6	AFS	LI
181	V01295		2/21/1914	VST	SPR	SE	NE	5N 65E 32	0.250	IRR		15.32	60	AFS	LI
181	V03840		2/1/1982	VST	SPR	SW	SW	3N 65E 30	0.000	STK		0	0.66	MGS	LI
181	V01135		9/30/1912	VST	SPR	SE	NE	2N 65E 36	0.030	STK		0	0.91	MGS	LI
181	V01134		9/30/1912	VST	SPR	SW	NW	2N 66E 31	0.030	STK		0	1.28	MGS	LI
204	49771	14088	3/18/1986	CER	OSW	NE	NE	5S 70E 24	0.006	STK		0	0.85	MGS	LI
204	49770	14087	3/18/1986	CER	OSW	SE	NE	6S 70E 01	0.006	STK		0	0.85	MGS	LI
207	3235	1872	1/11/1915	CER	STR	SW	NW	6N 61E 17	1.220	IRR		122.2	443	AFS	NY
207	3232	1869	1/11/1915	CER	STR	SE	NE	6N 61E 21	1.920	IRR		192.9	817.36	AFS	NY
207	4818	1371	1/4/1918	CER	STR	NW	SW	6N 59E 23	0.810	IRR		81.59	297.29	AFS	NY
207	2661	1868	3/14/1913	CER	STR	SE	NE	6N 61E 21	0.000	IRR		832.5	3330	AFS	NY
207	408	195	3/21/1907	CER	SPR	NW	NW	6N 59E 17	0.700	IRR		70.61	282.44	AFS	NY
207	8424	1790	1/5/1928	CER	SPR	NE	NW	6N 58E 09	0.005	STK		0	0.27	MGS	NY
207	20465	6662	5/14/1962	CER	STR	NW	SW	6N 61E 10	0.000	WLD		0	680	AFS	NY
208	9574	2205	3/18/1932	CER	RES	NE	NW	2S 61E 01	0.006	STK		0	0.93	MGS	LI
173B	15653	5836	5/17/1954	CER	STR	SW	NW	6N 57E 29	0.800	IRD		24.29	97.18	AFS	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173B	13004	3902	8/4/1949	CER	STR	SE	NE	6N 57E 30	0.500	IRR		82.58	330	AFS	NY
173B	11545	4798	4/9/1946	CER	STR	SW	SE	4N 55E 14	7.000	IRR		160	640	AFS	NY
173B	11232	3011	1/10/1945	CER	STR	SE	NE	6N 57E 30	1.070	IRR		107.04	449.14	AFS	NY
173B	10955	4104	5/10/1943	CER	STR	SE	NE	4N 55E 28	1.000	IRD		67.73	269	AFS	NY
173B	6759	2207	9/8/1922	CER	STR	SE	SE	4N 56E 18	0.850	IRR		85.38	362	AFS	NY
173B	4755	1110	12/4/1917	CER	STR	SE	SW	5N 57E 05	0.450	IRR		45.03	135.09	AFS	NY
173B	2512	2841	9/23/1912	CER	STR	SE	NE	6N 57E 30	1.070	IRR		107.04	324	AFS	NY
173B	1936	255	1/23/1911	CER	STR	SW	SW	5N 57E 05	0.130	IRR		13.1	39.3	AFS	NY
173B	1468	200	10/20/1909	CER	SPR	SE	NW	5N 57E 30	0.110	IRR		0	49.03	AFS	NY
173B	701	324	10/3/1907	CER	STR		SE	4N 55E 23	0.480	IRR		48	173.23	AFS	NY
173B	10835	3046	6/11/1942	CER	STR	SE	NE	6N 57E 30	0.001	STK		0	0.15	MGS	NY
173B	7937	1389	11/19/1926	CER	SPR	SW	NE	7N 58E 13	0.020	STK		0	3	MGS	NY
149	V02559		7/12/1966	VST	SPR	NW	SW	4N 48E 08	2.000	IRR		37.21	234.52	AFS	NY
149	V02552		10/5/1965	VST	SPR	SE	SW	4N 48E 08	2.000	IRR		37.21	234.52	AFS	NY
149	5845	2155	11/7/1919	CER	STR	NW	SE	2N 49E 11	0.070	IRR		6.98	26	AFS	NY
149	5343	1393	12/20/1918	CER	STR	SW	SE	2N 49E 12	0.250	IRR		25.43	77.04	AFS	NY
149	4536	1067	8/1/1917	CER	STR	NW	NW	1N 49E 02	0.550	IRR		55.19	264.9	AFS	NY
171	68839		5/24/2002	PER	SPR		LT3	1S 61E 06	0.006	STK		0	1.46	MGS	LI
171	68838		5/24/2002	PER	SPR		LT3	1S 61E 06	0.006	STK		0	0	MGS	LI

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
172	9592	2156	5/31/1932	CER	STR	NE	SE	3N 57E 07	0.100	IRR		10	36	AFS	NY
181	51776	13590	1/20/1988	CER	SPR	NW	SE	1N 65E 22	0.010	STK		0	0.3	MGS	LI
181	10120	2356	5/17/1937	CER	SPR	NW	NE	1N 65E 23	0.020	STK		0	1.7	MGS	LI
181	10119	2355	5/17/1937	CER	SPR	NE	SW	1N 65E 22	0.020	STK		0	1.7	MGS	LI
181	5356	526	1/16/1919	CER	SPR	SE	NW	1N 65E 11	0.000	STK		0	0.05	MGS	LI
204	4234	863	12/1/1916	CER	SPR	SE	SW	5S 69E 17	0.001	STK		0	0.08	MGS	LI
204	4233	862	12/1/1916	CER	SPR	NE	SE	5S 69E 20	0.002	STK		0	0.28	MGS	LI
204	4232	861	12/1/1916	CER	SPR	NW	NW	5S 69E 16	0.002	STK		0	0.19	MGS	LI
207	56658		8/9/1991	PER	UG		SW	6N 61E 09	0.010	REC		9.33	14.42	AFA	NY
207	V02429		9/11/1957	VST	OSW		NE	5N 60E 14	5.000	STK		0	3.65	MGS	NY
207	V02232		4/22/1931	VST	OSW			5N 60E 14	0.250	STK		0	24.57	MGS	NY
207	5486	1977	5/5/1919	CER	OSW	NE	NE	5N 60E 23	1.530	IRR		153.7	370	AFS	NY
207	23624	7468	1/20/1967	CER	STR		LT03	5N 61E 06	2.400	WLD		0	1120	AFS	NY
208	12510	4389	6/18/1948	CER	SPR	SW	NW	2S 63E 29	0.001	STK		0	0.31	MGS	LI
208	6497	1020	6/22/1921	CER	SPR	NE	NW	2S 62E 24	0.006	STK		0	0.54	MGS	LI
228	25628	8454	5/22/1970	CER	SPR	SW	SE	11S 46E 26	0.005	QM		0	1.2	MGA	NY
228	1197	420	11/27/1908	CER	SPR	SE	SE	12S 47E 06	0.080	IRR		8	29.19	AFS	NY
141	45977	11452	7/23/1982	CER	UG	SE	SE	4N 43E 16	0.009	STK		0	1.18	MGS	NY
141	43015	10696	12/26/1980	CER	UG	SW	SE	3N 44E 16	0.009	STK		0	1.17	MGS	NY
141	21270	6931	5/14/1963	CER	UG	NW	NW	4N 44E 05	0.060	STK		0	9.44	MGS	NY
141	11066	3016	2/14/1944	CER	UG	SW	NE	3N 43E 17	0.003	STK		0	0.37	MGS	NY
141	54328	15436	1/11/1990	CER	SPR	SW	SE	4N 44E 01	0.005	STK		0	1.18	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
141	5981	592	2/10/1920	CER	SPR	SW	SW	4N 45E 19	0.003	STK		0	0.37	MGA	NY
141	5980	591	2/10/1920	CER	SPR	SE	SE	4N 45E 19	0.003	STK		0	0.71	MGA	NY
141	5979	590	2/10/1920	CER	SPR	SE	SE	4N 45E 32	0.003	STK		0	2.17	AFA	NY
141	5799	858	10/8/1919	CER	SPR	NW	SE	4N 45E 12	0.001	STK		0	0.72	AFA	NY
141	5798	857	10/8/1919	CER	SPR	SE	NE	3N 45E 03	0.001	STK		0	7.23	AFA	NY
144	V09399		7/30/2003	VST	UG	NW	NE	5S 41E 26	0.000	STK		0	0	AFA	ES
144	44689	11442	10/26/1981	CER	UG	NW	SW	5S 40E 11	0.001	STK		0	0.24	MGA	ES
144	45465	12984	3/24/1982	CER	SPR	NW	NW	6S 40E 23	0.008	STK		0	1.83	MGA	ES
144	45465	12984	3/24/1982	CER	SPR	NW	NW	6S 40E 23	0.008	STK		0	1.83	MGA	ES
144	29680	10606	9/29/1975	CER	SPR	SW	NW	5S 40E 35	0.030	STK		0	4.53	MGA	ES
144	29680	10606	9/29/1975	CER	SPR	SW	NW	5S 40E 35	0.030	STK		0	4.53	MGA	ES
144	29675	8924	9/25/1975	CER	SPR	SW	SE	6S 40E 22	0.006	STK		0	1.32	MGA	ES
144	29675	8924	9/25/1975	CER	SPR	SW	SE	6S 40E 22	0.006	STK		0	1.32	MGA	ES
144	13656	4681	3/14/1951	CER	SPR	SE	SE	6S 40E 01	0.006	STK		0	1.46	MGA	ES
144	13656	4681	3/14/1951	CER	SPR	SE	SE	6S 40E 01	0.006	STK		0	1.46	MGA	ES
144	13655	4680	3/14/1951	CER	SPR	SW	SE	6S 40E 12	0.006	STK		0	1.46	MGA	ES
144	13655	4680	3/14/1951	CER	SPR	SW	SE	6S 40E 12	0.006	STK		0	1.46	MGA	ES
144	V00742		5/10/1909	VST	SPR		SW	5S 40E 36	0.000	OTH		0	0		ES
144	V00742		5/10/1909	VST	SPR		SW	5S 40E 36	0.000	OTH		0	0		ES
145	13289	4171	3/6/1950	CER	UG	SE	SW	4S 45E 36	0.007	STK		0	1.58	MGA	NY
145	13284	4169	3/6/1950	CER	UG	NE	SE	4S 45E 15	0.010	STK		0	2.26	MGA	NY
145	12784	4167	12/31/1948	CER	SPR	SW	NW	3S 46E 05	0.010	STK		0	2.26	MGA	NY
145	5929	848	1/2/1920	CER	SPR	SW	NW	3S 46E 05	0.020	STK		0	5.9	MGA	NY
146	4062	1184	7/17/1916	CER	UG	SE	NW	11S 45E 22	0.004	STK		0	0.63	MGS	NY
149	43621	11958	4/27/1981	CER	UG	NE	SW	3N 46E 10	0.009	STK		0	0.97	MGS	NY
149	V04560		4/2/1986	VST	SPR	SW	SW	6N 49E 35	0.030	STK		0	7.48	MGA	NY
149	V03351		5/23/1980	VST	SPR	NW	SE	4N 46E 16	0.010	STK		0	1.53	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
149	V03350		5/23/1980	VST	SPR	NW	SE	4N 46E 16	0.010	STK		0	1.53	MGA	NY
149	V03349		5/23/1980	VST	SPR	NE	SE	5N 46E 33	0.010	STK		0	1.53	MGA	NY
149	V03348		5/23/1980	VST	SPR	SW	SE	5N 46E 33	0.010	STK		0	1.53	MGA	NY
149	V03347		5/23/1980	VST	SPR	SE	SW	5N 46E 33	0.010	STK		0	1.53	MGA	NY
149	V03346		5/23/1980	VST	SPR	SE	SW	5N 46E 33	0.010	STK		0	1.53	MGA	NY
149	V03345		5/15/1980	VST	SPR	NW	NW	4N 46E 35	0.010	STK		0	1.53	MGA	NY
149	V03344		5/15/1980	VST	SPR	NE	SW	4N 46E 26	0.010	STK		0	1.53	MGA	NY
149	4318	7189	2/17/1917	CER	SPR	SW	SE	6N 47E 25	0.020	STK		0	5.9	MGA	NY
149	4317	7187	2/17/1917	CER	SPR	NE	NW	5N 47E 13	0.020	STK		0	5.9	MGA	NY
149	4316	7186	2/17/1917	CER	SPR	SW	NW	5N 47E 26	0.020	STK		0	5.9	MGA	NY
149	12037	3513	10/11/1947	CER	SPR	SW	SE	6N 49E 15	0.004	STK		0	0.8	MGA	NY
149	5925	790	12/26/1919	CER	SPR	SW	SE	6N 49E 22	0.000	STK		0	0.29	AFA	NY
149	4689	794	11/9/1917	CER	SPR	SE	SE	6N 49E 04	0.010	STK		0	2.83	MGA	NY
156	12597	3892	8/24/1948	CER	UG	NE	SW	8N 51E 34	0.010	STK		0	3.65	MGA	NY
156	12447	3495	5/13/1938	CER	UG	SW	SW	6N 50E 20	0.003	STK		0	0.71	MGA	NY
156	12598	3834	8/24/1948	CER	SPR	NE	NW	6N 51E 05	0.009	STK		0	2.12	MGA	NY
156	12446	3494	5/13/1948	CER	SPR	SW	SE	7N 50E 19	0.003	STK		0	0.71	MGA	NY
156	12039	3514	10/11/1947	CER	SPR	SE	NE	6N 49E 23	0.003	STK		0	0.8	MGA	NY
156	12038	3520	10/11/1947	CER	SPR	NE	NW	6N 49E 23	0.003	STK		0	0.8	MGA	NY
170	23218	6922	7/5/1966	CER	UG	SW	SW	3S 54E 24	0.006	STK		0	1.46	MGA	LI
170	23217	6891	7/5/1966	CER	UG	SW	SW	4S 55E 02	0.006	STK		0	1.46	MGA	LI
170	23216	6890	7/5/1966	CER	UG	SE	NE	4S 54E 12	0.006	STK		0	1.46	MGA	LI
170	12541	3216	7/15/1948	CER	UG	NE	NW	3S 54E 25	0.008	STK		0	1.82	MGA	LI
170	12540	3215	7/15/1948	CER	UG	NW	SW	4S 55E 04	0.010	STK		0	2.92	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
170	11694	3441	9/17/1946	CER	UG	NW	SE	3S 56E 29	0.008	STK		0	0.32	MGS	LI
170	11335	2951	7/16/1945	CER	UG	SE	SW	3S 56E 16	0.008	STK		0	1.82	MGA	LI
170	11332	2949	7/16/1945	CER	UG	SW	SE	3S 55E 23	0.009	STK		0	2.19	MGA	LI
170	3364	1984	4/24/1915	CER	UG	NW	SE	5S 55E 05	0.002	STK		0	0.54	MGA	LI
170	23225	6897	7/5/1966	CER	STR	NE	NW	2S 56E 31	0.006	STK		0	1.46	MGA	LI
170	3888	689	4/12/1916	CER	SPR	NE	NE	5S 54E 02	0.001	STK		0	0.36	MGA	NY
170	12044	3454	10/14/1947	CER	SPR	NE	NE	5S 52E 01	0.007	STK		0	1.71	MGA	NY
170	11605	3258	6/12/1946	CER	SPR	NW	NE	5S 52E 14	0.006	STK		0	1.46	MGA	NY
171	4665	1576	11/1/1917	CER	SPR	SE	SE	1N 61E 30	0.001	STK		0	0.06	MGA	LI
181	35774	10871	8/18/1978	CER	UG	NW	SE	3N 65E 21	0.000	STK		0	1.04	MGA	LI
181	5936	854	1/5/1920	CER	UG	SE	NW	5N 64E 14	0.030	STK		0	5.89	MGA	LI
181	V01302		2/21/1914	VST	SPR	NE	SE	4N 65E 33	0.130	STK		0	1.46	MGA	LI
181	V01301		2/21/1914	VST	SPR	NE	NE	5N 64E 18	0.040	STK		0	1.1	MGA	LI
181	V01299		3/10/1914	VST	SPR	NW	SW	4N 65E 29	0.010	STK		0	1.46	MGA	LI
181	V01287		11/6/1913	VST	SPR	NW	SW	4N 65E 15	0.010	STK		0	1.83	MGA	LI
181	V01250		6/8/1913	VST	SPR	SE	SE	2N 65E 24	0.010	STK		0	0.45	MGA	LI
181	V01027		3/10/1911	VST	SPR	NW	NW	4N 65E 16	0.010	STK		0	2.59	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
181	52109	13781	5/18/1988	CER	SPR	SE	SE	4S 64E 25	0.010	STK		0	2.12	MGA	LI
181	52108	13780	5/18/1988	CER	SPR	SW	NW	4S 65E 29	0.010	STK		0	3.07	MGA	LI
181	52107	13779	5/18/1988	CER	SPR	NW	NW	4S 65E 16	0.000	STK		0	0.47	MGA	LI
181	36180	10223	11/20/1978	CER	SPR	SE	SE	4N 65E 26	0.010	STK		0	1.58	MGA	LI
181	36179	10222	11/20/1978	CER	SPR	NE	NE	5N 64E 18	0.010	STK		0	1.89	MGA	LI
181	35954	10220	10/3/1978	CER	SPR	NW	SW	4N 65E 15	0.000	STK		0	1.05	MGA	LI
181	35952	10218	10/3/1978	CER	SPR	NW	SE	4N 65E 16	0.000	STK		0	1.05	MGA	LI
181	35843	10288	9/6/1978	CER	SPR	NW	NE	5N 65E 21	0.000	STK		0	0.38	MGA	LI
181	35771	10211	8/18/1978	CER	SPR	NW	SW	2N 64E 11	0.010	STK		0	1.06	MGA	LI
181	35768	10210	8/18/1978	CER	SPR	NE	SE	4N 65E 35	0.010	STK		0	1.06	MGA	LI
181	35767	10209	8/18/1978	CER	SPR	SE	NW	4N 65E 26	0.010	STK		0	1.58	MGA	LI
181	35766	10208	8/18/1978	CER	SPR	NW	SE	4N 65E 26	0.010	STK		0	3.29	MGA	LI
181	35764	10207	8/18/1978	CER	SPR	SE	NE	4N 65E 22	0.010	STK		0	1.06	MGA	LI
181	35763	10206	8/18/1978	CER	SPR	NE	SE	4N 65E 22	0.010	STK		0	1.06	MGA	LI
181	35762	10205	8/18/1978	CER	SPR	SE	SE	4N 65E 22	0.010	STK		0	1.06	MGA	LI
181	35761	10204	8/18/1978	CER	SPR	NW	NW	4N 65E 26	0.010	STK		0	1.06	MGA	LI
181	5200	1924	8/12/1918	CER	STR	SW	SE	4N 65E 26	0.060	STK		0	14.6	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
181	4697	733	11/12/1917	CER	SPR	SW	SE	4S 65E 31	0.000	STK		0	0.35	MGA	LI
181	4696	732	11/12/1917	CER	SPR	SE	SE	4S 65E 31	0.000	STK		0	0.71	MGA	LI
197	13319	3955	3/17/1950	CER	UG	SW	NW	1S 71E 17	0.004	STK		0	0.93	MGA	LI
204	63248	15727	7/15/1997	CER	UG	NE	SW	5S 70E 34	0.002	STK		0	0.53	MGA	LI
204	44731	11963	10/29/1981	CER	UG	SW	NE	5S 70E 31	0.010	STK		0	3.72	MGA	LI
204	44730	12441	10/29/1981	CER	UG	SW	SE	6S 68E 12	0.005	STK		0	1.46	MGA	LI
204	44729	11962	10/29/1981	CER	UG	NE	SW	5S 70E 34	0.030	STK		0	8.83	MGA	LI
204	44710	11961	10/29/1981	CER	UG	NW	SW	5S 70E 33	0.010	STK		0	3.72	MGA	LI
204	44709	11960	10/29/1981	CER	UG	SE	NE	6S 69E 09	0.030	STK		0	7.37	MGA	LI
207	19472	5834	1/23/1961	CER	UG	SE	SW	6N 59E 31	0.010	STK		0	3.68	MGA	NY
207	19471	5833	1/23/1961	CER	UG	NE	SE	6N 59E 32	0.010	STK		0	3.68	MGA	NY
207	13341	4053	3/28/1950	CER	UG	NW	NW	6N 62E 29	0.008	STK		0	1.29	MGS	NY
207	V01963		1/11/1926	VST	SPR	NE	NW	6N 62E 24	0.002	STK		0	4.38	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
207	V01962		1/11/1926	VST	SPR	NW	SE	6N 62E 35	0.002	STK		0	0.47	MGA	LI
207	20329	5898	3/1/1962	CER	SPR	NW	SW	6N 61E 08	0.010	STK		0	3.72	MGA	WP
207	8421	1791	1/5/1928	CER	SPR	NW	NW	6N 58E 02	0.004	STK		0	0.91	MGA	WP
207	4819	702	1/4/1918	CER	SPR	NE	SE	6N 59E 32	0.020	STK		0	5.9	MGA	NY
208	5970	932	2/2/1920	CER	SPR	NW	NW	3S 63E 05	0.010	STK		0	0.18	MGA	LI
208	4720	675	11/19/1917	CER	RES	NW	NE	3S 61E 08	0.000	STK		0	1.95	MGA	LI
228	13283	4664	3/6/1950	CER	SPR	NE	NE	8S 47E 10	0.010	STK		0	2.56	MGA	NY
173B	47282	12327	9/30/1983	CER	UG	NW	SE	5N 54E 14	0.030	STK		0	7.08	MGA	NY
173B	28626		8/20/1974	PER	UG	SW	NW	6N 56E 27	0.010	STK		0	3.65	MGA	NY
173B	12738	3893	11/26/1948	CER	UG	NW	SE	5N 54E 34	0.010	STK		0	1.95	MGS	NY
173B	11926	3845	7/24/1947	CER	UG	NE	SE	6N 54E 34	0.001	STK		0	0.24	MGS	NY
173B	V00736		8/5/1909	VST	SPR	SE	SW	5N 57E 31	0.000	IRR		60	0		NY
173B	V02203		12/15/1928	VST	SPR	SE	SE	5N 56E 04	0.020	STK		0	2.92	MGA	NY
173B	12668	4165	10/2/1948	CER	SPR	NW	SW	7N 59E 18	0.010	STK		0	2.55	MGA	NY
173B	11200	3085	11/10/1944	CER	OSW	NW	NE	5N 54E 24	0.007	STK		0	1.82	MGA	NY
173B	11199	3429	11/10/1944	CER	SPR	NE	SW	3N 55E 09	0.003	STK		0	0.73	MGA	NY
173B	10866	3039	9/19/1942	CER	STR	SE	NE	4N 55E 28	0.010	STK		0	3.65	MGA	NY
173B	9524	2244	9/4/1931	CER	OSW	NW	SW	5N 54E 34	0.020	STK		0	4.72	MGA	NY
173B	9465	2533	6/2/1931	CER	STR	SE	SW	5N 57E 05	0.060	STK		0	14.6	MGA	NY
173B	9085	2208	10/11/1929	CER	SPR	NW	SW	4N 56E 08	0.003	STK		0	0.73	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173B	8778	2243	12/15/1928	CER	STR	SW	SE	4N 55E 14	0.010	STK		0	3.77	MGA	NY
173B	5663	950	8/9/1919	CER	SPR	NW	NE	6N 54E 12	0.020	STK		0	4.7	MGA	NY
173B	5661	948	8/9/1919	CER	SPR	NE	SW	6N 54E 24	0.020	STK		0	4.7	MGA	NY
141	7357	2253	5/6/1925	CER	SPR	NW	SE	2S 45E 13	0.001	STK		0	0.29	MGA	NY
142	12365	3579	3/25/1948	CER	SPR	SE	NW	2N 42E 35	0.005	STK		0	1.28	MGA	ES
144	V01437		12/23/1915	VST	SPR	SE	SW	5S 41E 18	0.000	STK		0	0		ES
144	V01437		12/23/1915	VST	SPR	SE	SW	5S 41E 18	0.000	STK		0	0		ES
144	V04523		8/26/1985	VST	SPR	SE	SW	5S 41E 07	0.004	STK		0	0		ES
144	V04523		8/26/1985	VST	SPR	SE	SW	5S 41E 07	0.004	STK		0	0		ES
144	V04522		8/26/1985	VST	SPR	SE	SE	5S 41E 08	0.005	STK		0	0		ES
144	V04522		8/26/1985	VST	SPR	SE	SE	5S 41E 08	0.005	STK		0	0		ES
144	V04223		10/24/1984	VST	SPR	NE	SW	5S 41E 33	0.001	STK		0	0		ES
144	V04223		10/24/1984	VST	SPR	NE	SW	5S 41E 33	0.001	STK		0	0		ES
144	V04131		1/30/1984	VST	SPR	NW	NW	6S 40E 23	0.020	STK		0	0		ES
144	V04131		1/30/1984	VST	SPR	NW	NW	6S 40E 23	0.020	STK		0	0		ES
144	29566	8847	8/8/1975	CER	SPR	NE	NW	5S 41E 06	0.010	STK		0	0		ES
144	29566	8847	8/8/1975	CER	SPR	NE	NW	5S 41E 06	0.010	STK		0	0		ES
144	25783	8702	9/4/1970	CER	SPR	SW	SE	6S 41E 07	0.002	STK		0	0		ES
144	25783	8702	9/4/1970	CER	SPR	SW	SE	6S 41E 07	0.002	STK		0	0		ES
144	6864	1130	2/17/1923	CER	SPR	SW	NE	5S 40E 36	0.006	STK		0	0		ES
144	6864	1130	2/17/1923	CER	SPR	SW	NE	5S 40E 36	0.006	STK		0	0		ES
145	8977	2201	6/30/1929	CER	OSW	SW	SW	5S 44E 01	0.003	STK		0	0.73	MGA	NY
149	V04770		4/4/1989	VST	SPR	SE	NE	2N 49E 24	0.030	STK		0	7.55	MGA	NY
149	V04760		12/23/1988	VST	SPR	SW	NW	1N 49E 01	0.030	STK		0	7.48	MGA	NY
149	V04681		5/27/1988	VST	SPR	SW	NW	2N 49E 14	0.030	STK		0	7.48	MGA	NY

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
149	V04680		5/27/1988	VST	SPR	SW	NE	2N 49E 15	0.030	STK		0	7.48	MGA	NY
149	V04679		5/27/1988	VST	SPR	SW	NW	2N 49E 13	0.030	STK		0	7.48	MGA	NY
149	V04678		5/27/1988	VST	SPR	NW	SW	2N 49E 14	0.030	STK		0	7.48	MGA	NY
149	V04677		5/27/1988	VST	SPR	NE	NW	2N 49E 23	0.030	STK		0	7.48	MGA	NY
149	V02379		1/25/1951	VST	SPR	NW	NW	1N 49E 03	0.020	STK		0	5.84	MGA	NY
149	52158		5/27/1988	PER	LAK	SW	SW	2N 49E 24	0.030	STK		0	7.48	MGA	NY
149	52157	15231	5/27/1988	CER	SPR	NE	NW	2N 49E 23	0.030	STK		0	7.3	MGA	NY
149	52156	15230	5/27/1988	CER	SPR	NW	SW	2N 49E 14	0.030	STK		0	7.3	MGA	NY
149	52155	15229	5/27/1988	CER	SPR	SW	NW	2N 49E 13	0.030	STK		0	7.3	MGA	NY
149	52154	13887	5/27/1988	CER	SPR	SW	NW	2N 49E 14	0.030	STK		0	7.48	MGA	NY
149	52153	15228	5/27/1988	CER	SPR	SE	NW	2N 49E 15	0.030	STK		0	7.3	MGA	NY
149	4315	7185	2/17/1917	CER	SPR	NW	NW	4N 47E 11	0.020	STK		0	5.9	MGA	NY
156	13539	3696	11/16/1950	CER	UG	SE	SW	5N 51E 11	0.030	STK		0	7.55	MGA	NY
156	V04765		4/4/1989	VST	SPR	SE	NW	2N 49E 25	0.030	STK		0	7.55	MGA	NY
156	V04764		4/4/1989	VST	SPR	SE	SE	2N 49E 26	0.030	STK		0	7.55	MGA	NY
156	V04763		4/4/1989	VST	SPR	SW	NE	2N 49E 25	0.030	STK		0	7.55	MGA	NY
156	V04682		5/27/1988	VST	LAK	SW	SW	2N 49E 24	0.000	STK		0	7.48	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	57382	15491	4/2/1992	CER	SPR	SE	NE	5N 49E 24	0.030	STK		0	7.48	MGA	NY
156	56994	16247	12/10/1991	CER	SPR	NE	NE	5N 49E 14	0.030	STK		0	7.48	MGA	NY
156	52831	13095	12/22/1988	CER	SPR	NW	SE	1N 49E 12	0.030	STK		0	7.48	MGA	NY
156	52830	13094	12/22/1988	CER	SPR	NW	NW	1N 49E 13	0.030	STK		0	7.48	MGA	NY
156	52829	13093	12/22/1988	CER	SPR	SE	SW	1N 49E 12	0.030	STK		0	7.48	MGA	NY
156	52828	13109	12/22/1988	CER	SPR	NE	NW	1N 50E 18	0.030	STK		0	7.48	MGA	NY
156	52827	13108	12/22/1988	CER	SPR	SE	NE	1N 50E 18	0.030	STK		0	7.48	MGA	NY
156	52826	13107	12/22/1988	CER	SPR	SE	SE	1N 50E 07	0.030	STK		0	7.48	MGA	NY
156	52825	13106	12/22/1988	CER	SPR	SW	SE	1N 50E 07	0.030	STK		0	7.48	MGA	NY
156	52824	13105	12/22/1988	CER	SPR	SE	SE	1N 50E 07	0.030	STK		0	7.48	MGA	NY
156	52821	13103	12/22/1988	CER	SPR	NE	SE	1N 50E 06	0.030	STK		0	7.48	MGA	NY
156	52820	13102	12/22/1988	CER	SPR	SE	SE	1N 50E 06	0.030	STK		0	7.48	MGA	NY
156	52817	13092	12/22/1988	CER	SPR	SE	SE	1N 49E 01	0.030	STK		0	7.48	MGA	NY
156	52816	13091	12/22/1988	CER	SPR	NE	SW	1N 49E 01	0.030	STK		0	7.48	MGA	NY
156	52815	13090	12/22/1988	CER	SPR	NW	SW	1N 49E 01	0.030	STK		0	7.48	MGA	NY
156	52814	13089	12/22/1988	CER	SPR	SW	NW	1N 49E 01	0.030	STK		0	7.48	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	52813	13099	12/22/1988	CER	SPR	NW	SW	1N 50E 06	0.030	STK		0	7.48	MGA	NY
156	52812	13088	12/22/1988	CER	SPR	SE	SW	2N 49E 36	0.030	STK		0	7.48	MGA	NY
156	52811	13087	12/22/1988	CER	SPR	SW	NE	2N 49E 25	0.030	STK		0	7.48	MGA	NY
156	52810	13086	12/22/1988	CER	SPR	SE	SE	2N 49E 26	0.030	STK		0	7.48	MGA	NY
156	52809	13085	12/22/1988	CER	SPR	SE	NW	2N 49E 25	0.030	STK		0	7.48	MGA	NY
156	52808	13098	12/22/1988	CER	SPR	SE	NE	2N 49E 24	0.030	STK		0	7.48	MGA	NY
156	45382	15322	2/23/1982	CER	SPR	SW	NW	5N 49E 13	0.003	STK		0	0.78	MGA	NY
156	13253	3522	2/3/1950	CER	STR	SW	SE	5N 51E 11	0.010	STK		0	2.37	MGA	NY
156	V01529		12/13/1917	VST	SPR	SE	SW	7N 49E 28	0.500	STK		0	0	*	NY
156	V04559		4/2/1986	VST	SPR	NW	SW	6N 49E 36	0.030	STK		0	0		NY
156	V04558		4/2/1986	VST	SPR	SW	SW	6N 49E 25	0.030	STK		0	0	*	NY
156	V02076		3/27/1927	VST	SPR	SE	SW	7N 50E 24	0.000	STK		0	0	*	NY
156	12692	3521	10/14/1948	CER	OSW	SE	NE	4S 51E 05	0.030	STK		0	0		NY
170	62607		11/20/1996	PER	UG	NE	NW	3S 55E 36	0.220	COM		0	20.92	MGA	LI
170	23233	6900	7/5/1966	CER	SPR	NW	NW	2S 57E 17	0.003	STK		0	0.73	MGA	LI
170	23230	6903	7/5/1966	CER	STR	SE	SE	2S 56E 17	0.006	STK		0	1.46	MGA	LI
170	23228	6901	7/5/1966	CER	STR	NE	NW	1S 56E 19	0.006	STK		0	1.46	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
170	23227	6899	7/5/1966	CER	RES	SW	SE	1S 55E 35	0.006	STK		0	1.46	MGA	LI
170	23226	6898	7/5/1966	CER	STR	NW	NE	2S 55E 24	0.006	STK		0	1.46	MGA	LI
170	10438		11/8/1939	PER	SPR	SE	NW	2S 57E 27	0.020	STK		0	5.9	MGA	LI
170	6070	776	4/26/1920	CER	SPR	NW	NW	3S 57E 24	0.007	STK		0	3.65	MGA	LI
170	6068	775	4/26/1920	CER	SPR	SW	SE	2S 57E 28	0.007	STK		0	1.46	MGA	LI
171	7915	2438	10/20/1926	CER	SPR	NE	NE	1N 61E 03	0.001	STK		0	0.2	MGA	LI
171	7344	1284	4/26/1925	CER	SPR	NW	NW	1N 60E 36	0.010	STK		0	3.65	MGA	LI
181	V04697		9/16/1988	VST	SPR	NW	NW	1N 65E 35	0.050	STK		0	4.01	MGA	LI
181	V02351		9/8/1947	VST	SPR	SW	SE	4S 65E 14	0.020	STK		0	0.44	MGA	LI
181	52106	13778	5/18/1988	CER	SPR	NW	NE	3S 65E 28	0.000	STK		0	0.47	MGA	LI
181	52105	13777	5/18/1988	CER	SPR	NW	SE	3S 65E 21	0.000	STK		0	0.71	MGA	LI
181	52104	13776	5/18/1988	CER	SPR	SW	NE	3S 65E 21	0.000	STK		0	0.15	MGA	LI
181	52103	13775	5/18/1988	CER	SPR	SW	NW	2S 63E 22	0.010	STK		0	2.12	MGA	LI
181	12840	4502	3/7/1949	CER	SPR	NE	SW	2S 63E 27	0.000	STK		0	0.53	MGA	LI
181	12793	4501	1/8/1949	CER	SPR	NE	NW	2S 63E 27	0.010	STK		0	0.91	MGA	LI
181	12512	4391	6/18/1948	CER	SPR	SW	SW	2S 63E 34	0.000	STK		0	0.49	MGA	LI
181	12511	4390	6/18/1948	CER	SPR	NW	SE	2S 63E 32	0.000	STK		0	0.61	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
181	11033	3063	12/3/1943	CER	SPR	SE	NE	1N 66E 26	0.000	STK		0	0.73	MGA	LI
181	9618	2107	8/11/1932	CER	OSW	NE	NW	3S 64E 11	0.010	STK		0	2.21	MGA	LI
181	6803	971	10/23/1922	CER	SPR	NE	SW	1N 65E 22	0.000	STK		0	0.52	MGA	LI
181	6094	1053	5/6/1920	CER	SPR	NE	SE	2S 63E 33	0.010	STK		0	2.12	MGA	LI
181	4961	525	3/14/1918	CER	SPR	NW	NE	1N 65E 23	0.000	STK		0	0.71	MGA	LI
181	V01300	233	3/10/1914	VST	SPR	NW	SW	4N 65E 33	0.010	STK		0	0		LI
197	9739	2119	4/17/1934	CER	SPR	SW	SE	1S 71E 30	0.009	STK		0	2.19	MGA	LI
204	6763	1650	9/16/1922	CER	SPR	SE	NW	4S 70E 33	0.020	STK		0	3.76	MGA	LI
204	V01122	179	7/6/1912	VST	SPR	SE	SW	6S 70E 12	0.010	STK		0	0		LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
204	V01103	176	6/4/1912	VST	SPR	NW	NE	7S 69E 02	0.020	STK		0	0		LI
204	V01102	175	6/4/1912	VST	SPR	SW	NW	7S 69E 01	0.020	STK		0	0		LI
204	V01101	174	6/4/1912	VST	SPR	NW	NE	6S 69E 28	0.020	STK		0	0		LI
204	V01099	173	6/4/1912	VST	SPR	SW	SW	6S 69E 34	0.020	STK		0	0		LI

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
204	V01098	172	6/4/1912	VST	SPR	NW	NW	7S 69E 03	0.020	STK		0	0		LI
204	V01097	171	6/4/1912	VST	SPR	SW	SW	7S 69E 03	0.020	STK		0	0		LI
204	V01095	170	6/4/1912	VST	SPR	SW	SE	6S 69E 27	0.020	STK		0	0		LI
208	11308	3187	6/6/1945	CER	SPR	SE	SW	2S 62E 24	0.002	STK		0	0.53	MGA	LI
228	6083	1167	5/1/1920	CER	SPR	NW	SW	11S 46E 26	0.004	STK		0	0.91	MGA	NY
228	5998	1166	2/27/1920	CER	SPR	SW	SE	11S 46E 26	0.004	STK		0	0.91	MGA	NY
173A	46194	11458	10/7/1982	CER	SPR	SW	SW	1N 52E 07	0.003	STK		0	0.78	MGA	NY
173A	13501	3621	9/21/1950	CER	SPR	NE	SW	1N 52E 22	0.030	STK		0	7.48	MGA	NY
173A	5947	666	1/12/1920	CER	SPR	SE	NW	2N 52E 04	0.003	STK		0	0.71	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173B	52146	15222	5/27/1988	CER	SPR	NW	SW	4N 53E 06	0.003	STK		0	0.78	MGA	NY
173B	12529	4050	7/8/1948	CER	SPR	NE	SE	3N 54E 25	0.010	STK		0	3.72	MGA	NY
173B	2902	287	3/5/1914	CER	SPR	NW	NW	3N 55E 30	0.020	STK		0	3.65	MGA	NY
173B	V02341		2/10/1947	VST	STR			4N 55E 23	0.250	STK		0	0		NY
173B	V02249		9/4/1931	VST	SPR	SW	NE	6N 54E 11	0.020	STK		0	0		NY
173B	V02248		9/4/1931	VST	STR	NE	SW	5N 57E 05	1.000	STK		0	0		NY
173B	V02247		9/4/1931	VST	SPR	NE	SW	6N 54E 23	0.100	STK		0	0		NY
173B	11829	3445	4/12/1947	CER	STR	SE	SW	6N 57E 27	0.850	PWR		0	0	*	NY
227A	11120	3173	5/13/1944	CER	SPR	NW	NW	12S 51E 05	0.006	STK		0	1.42	MGA	NY
141	13018	5896	8/8/1949	CER	UG	SE	NE	1N 45E 19	0.010	STK		0	1.98	MGS	NY
141	43360	11182	3/19/1981	CER	UG	NW	NW	2N 44E 19	0.009	STK		0	0.97	MGS	NY
141	25630	8095	5/25/1970	CER	UG	NE	SW	3N 43E 36	0.050	IND		0	2.56	MGA	NY
141	13228	7368	1/11/1950	CER	UG	SW	SW	2N 45E 21	0.020	STK		0	3.67	MGS	NY
141	1336	380	4/16/1909	CER	SPR	SE	NE	3N 45E 22	0.010	IRR		1	4	AFA	NY
142	10237	2443	4/7/1938	CER	UG	NW	SW	2S 42E 35	0.040	MM		0	8.61	MGA	ES
142	10124	2442	6/1/1937	CER	UG	NW	NW	2S 42E 24	0.040	MM		0	8.65	MGA	ES
142	48262	12103	8/1/1984	CER	UG	SE	NE	3S 42E 10	0.006	STK		0	1.42	MGA	ES
142	44219	11583	7/31/1981	CER	UG	NW	SW	2S 42E 35	0.010	STK		0	3.54	MGA	ES
142	17450	5160	12/24/1957	CER	UG	NE	NE	1S 42E 10	0.003	STK		0	0.73	MGA	ES
142	13414	3580	6/13/1950	CER	UG	NE	SW	2S 42E 26	0.008	STK		0	1.89	MGA	ES
142	13113	4036	10/18/1949	CER	UG	SE	NE	3S 42E 03	0.007	STK		0	1.64	MGA	ES
142	44439	13629	9/17/1981	CER	UG	NW	SW	2S 42E 35	0.020	MM		0	2.34	MGA	ES

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
142	9700	2439	10/2/1933	CER	UG	SE	SE	1N 41E 26	0.001	STK		0	0.37	MGS	ES
142	V01207	141	1/17/1913	VST	SPR	SE	SE	3S 42E 03	0.010	DOM		0	0		ES
142	1147	46	10/16/1908	CER	SPR	SE	NE	2S 43E 28	0.020	MM		0	5.9	MGA	ES
142	4309	3128	2/17/1917	CER	SPR	NW	SW	2S 41E 36	0.001	STK		0	0		ES
142	13604	7095	1/16/1951	CER	SPR	NE	SW	2S 42E 33	0.005	STK		0	1.17	MGA	ES
142	11112	3049	4/25/1944	CER	SPR	SE	NW	3S 42E 03	0.002	STK		0	0.37	MGA	ES
142	7730	1542	4/26/1926	CER	SPR	SW	NE	2S 43E 28	0.005	STK		0	1.18	MGA	NY
142	2395	126	4/1/1912	CER	SPR	SW	SW	3S 42E 02	0.005	QM		0	1.06	MGA	ES
142	V01208	142	1/17/1913	VST	SPR	S2	NE	1S 41E 26	0.100	MM		0	0		ES
144	15885	4919	12/8/1954	CER	UG	SW	SW	5S 43E 17	0.005	DOM		0	0		ES
144	48008	12005	4/30/1984	CER	UG	NW	NW	5S 43E 20	0.010	STK		0	3.68	MGA	ES
144	29674	8849	9/25/1975	CER	UG	NE	SW	6S 43E 05	0.010	STK		0	2.36		ES
144	25976	8043	2/26/1971	CER	UG	NE	NE	4S 43E 33	0.010	STK		0	2.36	MGA	NY
144	11765	4034	2/4/1947	CER	UG	NW	SE	6S 43E 05	0.009	STK		0	1.97	MGA	ES
144	44375	13750	8/28/1981	CER	UG	NE	NE	4S 43E 33	0.060	MM		0	0.04	MGA	NY
144	61321		6/19/1995	PER	UG	SE	NW	6S 41E 06	0.500	MM		0	0.36	MGA	ES
144	29058	13630	12/17/1974	CER	UG	NW	NW	6S 41E 06	0.070	MM		0	1.78	MGA	ES
144	9366	2304	11/4/1930	CER	UG	NW	NW	6S 41E 06	0.030	MM		0	7.3	MGA	ES
144	46880	14192	5/5/1983	CER	SPR	SW	SE	6S 40E 22	0.010	MM		0	2.59	MGA	ES
144	46880	14192	5/5/1983	CER	SPR	SW	SE	6S 40E 22	0.010	MM		0	2.59	MGA	ES
144	45240	13632	1/18/1982	CER	SPR	NW	NW	6S 40E 23	0.010	QM		0	0.18	MGA	ES
144	45240	13632	1/18/1982	CER	SPR	NW	NW	6S 40E 23	0.010	QM		0	0.18	MGA	ES
144	26477	8707	1/14/1972	CER	SPR	SW	NW	5S 40E 35	0.050	QM		0	2.56	MGA	ES
144	26477	8707	1/14/1972	CER	SPR	SW	NW	5S 40E 35	0.050	QM		0	2.56	MGA	ES
144	9923	2507	12/21/1935	CER	SPR	SE	SW	6S 40E 22	0.010	MM		0	0		ES
144	9923	2507	12/21/1935	CER	SPR	SE	SW	6S 40E 22	0.010	MM		0	0		ES

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
144	9657	2379	5/4/1933	CER	SPR	NW	SW	4S 41E 31	0.020	MM		0	0		ES
144	9657	2379	5/4/1933	CER	SPR	NW	SW	4S 41E 31	0.020	MM		0	0		ES
144	27	555X	12/20/1905	CER	SPR	SW	SE	5S 40E 36	1.000	IRR		3	9	AFA	ES
144	27	555X	12/20/1905	CER	SPR	SW	SE	5S 40E 36	1.000	IRR		3	9	AFA	ES
144	51301	12809	9/15/1987	CER	SPR	SE	SE	5S 40E 36	0.001	DOM		0	0.35	MGA	ES
144	51301	12809	9/15/1987	CER	SPR	SE	SE	5S 40E 36	0.001	DOM		0	0.35	MGA	ES
144	2089	238	6/5/1911	CER	SPR		LT03	5S 41E 07	1.000	DOM		0	0		ES
144	2089	238	6/5/1911	CER	SPR		LT03	5S 41E 07	1.000	DOM		0	0		ES
145	3909	1582	4/15/1916	CER	SPR	SW	SW	2S 43E 36	0.004	STK		0	0.8	MGA	NY
145	3908	1581	4/15/1916	CER	SPR	SE	NW	2S 44E 31	0.004	STK		0	0.8	MGA	NY
145	12362	3773	3/25/1948	CER	SPR	SE	SE	4S 44E 32	0.010	STK		0	2.3	MGA	NY
146	14608	4878	11/3/1952	CER	UG	NE	SW	8S 43E 23	0.040	MM		0	10.61	MGA	NY
146	58102		9/17/1992	PER	UG	NW	SW	7S 44E 34	0.100	QM		0	8.5	AFA	NY
146	29175	9650	1/30/1975	CER	UG	NE	NW	9S 46E 20	0.009	STK		0	2.12	MGA	NY
146	29136	9627	1/13/1975	CER	UG	SW	SE	9S 45E 34	0.009	STK		0	2.12	MGA	NY
146	29135	9626	1/13/1975	CER	UG	SW	NE	9S 46E 35	0.009	STK		0	2.12	MGA	NY
146	11287	3142	5/14/1945	CER	UG	SE	SE	8S 44E 11	0.005	STK		0	1.18	MGA	NY
146	11082	3358	3/9/1944	CER	UG	SE	SE	9S 46E 20	0.010	STK		0	3.77	MGA	NY
146	11081	3357	3/9/1944	CER	UG	NW	SW	9S 46E 36	0.010	STK		0	3.77	MGA	NY
146	6726	1234	7/31/1922	CER	UG	NW	SE	9S 46E 29	0.001	STK		0	0.24	MGA	NY
146	48429	13619	9/21/1984	CER	UG	NW	NW	7S 46E 25	0.220	QM		0	4.54	MGA	NY
146	12364	3769	3/25/1948	CER	UG	NE	NE	7S 42E 26	0.010	STK		0	2.3	MGA	ES
146	11285	3360	5/14/1945	CER	UG	NW	NE	8S 43E 24	0.010	STK		0	1.26	MGS	NY
146	11083	3359	3/9/1944	CER	UG	NW	NW	10S 45E 17	0.010	STK		0	3.77	MGA	NY
146	6534	1232	8/10/1921	CER	UG	NE	SW	11S 46E 08	0.001	STK		0	0.24	MGA	NY
146	4409	1194	4/25/1917	CER	UG	SW	NW	11S 46E 08	0.009	STK		0	1.25	MGS	NY
149	V02364		8/25/1950	VST	UG	SE	SE	1N 46E 31	0.040	STK		0	0		NY
149	V02363		8/25/1950	VST	UG	NE	NE	1N 47E 30	0.040	STK		0	8.02	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
149	43016	10697	12/26/1980	CER	UG	SW	NE	1N 46E 09	0.009	STK		0	1.17	MGS	NY
149	43011	10695	12/26/1980	CER	UG	SE	SE	1N 46E 31	0.009	STK		0	1.17	MGA	NY
149	5341	1079	12/20/1918	CER	UG	SW	SE	3N 49E 11	0.009	STK		0	2.12	MGA	NY
149	5340	1078	12/20/1918	CER	UG	SE	NW	3N 49E 13	0.009	STK		0	2.12	MGA	NY
149	13229	5374	1/11/1950	CER	UG	NW	SE	2N 46E 15	0.040	STK		0	6.14	MGS	NY
149	21657	5761	11/22/1963	CER	UG	NE	SW	3N 46E 10	0.100	DOM		0	0.79	MGA	NY
149	V03866		5/3/1982	VST	STR	NE	SE	4N 48E 34	0.010	STK		0	1.28	MGS	NY
149	V02385		4/12/1951	VST	RES	NE	NE	1S 46E 14	0.010	STK		0	0		NY
149	V02362		8/25/1950	VST	STR	NE	SE	4N 48E 34	0.010	STK		0	2.19	MGA	NY
149	52160	15232	5/27/1988	CER	SPR	NE	SE	3N 49E 36	0.005	STK		0	1.06	MGA	NY
149	47796		3/14/1984	PER	STR	SE	NE	4N 48E 34	0.050	STK		0	3.5	AFA	NY
149	47795		3/14/1984	PER	STR	NE	SE	4N 48E 34	0.050	STK		0	0.5	AFA	NY
149	4313	7182	2/17/1917	CER	SPR	SE	NE	2N 47E 14	0.006	STK		0	1.46	MGA	NY
149	11062	2892	2/1/1944	CER	SPR	NE	NW	3N 50E 06	0.004	STK		0	0.95	MGA	NY
149	5339	1077	12/20/1918	CER	SPR	NE	SE	2N 49E 04	0.009	STK		0	2.12	MGA	NY
149	V02361		8/25/1950	VST	OSW	NW	NE	3N 48E 06	0.010	STK		0	0		NY
149	6835	1395	12/18/1922	CER	SPR	NE	NE	2N 49E 13	0.020	MM		0	5.26	MGA	NY
156	52145	15221	5/27/1988	CER	UG	SW	SW	3N 51E 11	0.010	STK		0	3.68	MGA	NY
156	49019	12965	4/29/1985	CER	UG	SW	NW	5N 51E 07	0.030	IND		0	7.08	MGA	NY
156	49018	12964	4/29/1985	CER	UG	SE	NW	5N 51E 07	0.030	IND		0	7.08	MGA	NY
156	23352	6873	8/25/1966	CER	UG	NE	NW	5N 51E 19	0.002	STK		0	0.47	MGA	NY
156	28909	9821	11/14/1974	CER	UG	NW	NW	6N 50E 10	0.008	MM		0	5.79	AFA	NY
156	19261	5377	10/11/1960	CER	UG	NE	NW	6N 51E 22	0.100	DOM		0	0.65	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	V04762		12/23/1988	VST	SPR			2N 50E 36	0.030	STK		0	0		NY
156	V04754		12/23/1988	VST	SPR	SW	NW	1N 50E 05	0.030	STK		0	0		NY
156	V04752		12/23/1988	VST	SPR	SW	NE	1N 50E 05	0.030	STK		0	0		NY
156	V04751		12/23/1988	VST	SPR	SE	NW	1N 50E 04	0.030	STK		0	0		NY
156	V04676		5/27/1988	VST	SPR	SE	SE	1N 50E 08	0.030	STK		0	0		NY
156	V04675		5/27/1988	VST	SPR	SE	SE	1N 50E 16	0.030	STK		0	0		NY
156	V04674		5/27/1988	VST	SPR	NE	NW	1N 50E 21	0.030	STK		0	0		NY
156	V04673		5/27/1988	VST	SPR	NE	SW	1N 50E 20	0.030	STK		0	0		NY
156	V03763		2/23/1982	VST	SPR	NW	NW	4N 49E 01	0.030	STK		0	0	*	NY
156	V02684		10/7/1970	VST	SPR	SW	SW	1N 50E 05	0.030	STK		0	0.24	MGA	NY
156	V02683		10/7/1970	VST	SPR	SW	SW	1N 50E 08	0.030	STK		0	0.24	MGA	NY
156	V02682		10/7/1970	VST	SPR	SE	SE	2N 50E 31	0.030	STK		0	0.24	MGA	NY
156	V02681		10/7/1970	VST	SPR	NE	SE	2N 50E 32	0.030	STK		0	0.24	MGA	NY
156	52806	14127	12/22/1988	CER	SPR	NW	NE	2N 50E 21	0.002	STK		0	0.52	MGA	NY
156	52162	15233	5/27/1988	CER	SPR	SW	SE	2N 50E 16	0.010	STK		0	4.2	MGA	NY
156	52161	15258	5/27/1988	CER	SPR	NE	NW	2N 50E 04	0.001	STK		0	0.26	MGA	NY
156	52152	15227	5/27/1988	CER	SPR	NW	NW	1N 50E 20	0.010	STK		0	3.68	MGA	NY
156	52150	15225	5/27/1988	CER	SPR	NE	NW	1N 50E 21	0.010	STK		0	2.62	MGA	NY

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	20485	5739	5/24/1962	CER	SPR	SE	SE	1N 50E 10	0.010	STK		0	3.79	MGA	NY
156	18731	5615	4/18/1960	CER	STR	NE	SE	4N 50E 20	0.500	IRD		10	40	AFS	NY
156	16461	5048	5/6/1955	CER	SPR	SW	SW	4N 50E 20	0.500	IRR		7.5	30	AFS	NY
156	12579	3430	8/17/1948	CER	SPR	NE	NW	4N 49E 01	0.010	STK		0	3.77	MGA	NY
156	9895	4213	9/3/1935	CER	SPR	NW	SW	4N 50E 20	0.060	IRR		5.5	22	AFA	NY
156	4547	1937	8/23/1917	CER	SPR	SE	NE	2N 50E 22	0.010	STK		0	1.82	MGS	NY
156	V05639		12/10/1991	VST	SPR	NE	NE	5N 49E 14	0.030	STK		0	0		NY
156	V04814		4/4/1989	VST	SPR	SE	NW	1N 50E 07	0.030	STK		0	0		NY
156	V04812		4/4/1989	VST	SPR	SW	SW	1N 49E 01	0.030	STK		0	0		NY
156	V04761		12/23/1988	VST	SPR	NW	SW	1N 50E 06	0.030	STK		0	0		NY
156	V04759		12/23/1988	VST	SPR	NW	SW	1N 49E 01	0.030	STK		0	0		NY
156	V04758		12/23/1988	VST	SPR	NE	SW	1N 49E 01	0.030	STK		0	0		NY
156	V04757		12/23/1988	VST	SPR	SE	SE	1N 49E 01	0.030	STK		0	0		NY
156	V04755		12/23/1988	VST	SPR	SE	SE	1N 50E 06	0.030	STK		0	0		NY
156	V04753		12/23/1988	VST	SPR	NE	SE	1N 50E 06	0.030	STK		0	0		NY
156	V04750		12/23/1988	VST	SPR	SE	SE	1N 50E 07	0.030	STK		0	0		NY
156	V04749		12/23/1988	VST	SPR	SW	SE	1N 50E 07	0.030	STK		0	0		NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	V04748		12/23/1988	VST	SPR	SE	SE	1N 50E 07	0.030	STK		0	0		NY
156	V04747		12/23/1988	VST	SPR	SE	NE	1N 50E 18	0.030	STK		0	0		NY
156	V04746		12/23/1988	VST	SPR	NE	NW	1N 50E 18	0.030	STK		0	0		NY
156	V04745		12/23/1988	VST	SPR	SE	SW	1N 49E 12	0.030	STK		0	0		NY
156	V04744		12/23/1988	VST	SPR	NW	NW	1N 49E 13	0.030	STK		0	0		NY
156	V04743		12/23/1988	VST	OSW	NW	SE	1N 49E 12	0.030	STK		0	0		NY
156	V04683		5/27/1988	VST	LAK	SE	SE	2N 49E 23	0.000	STK		0	0		NY
156	V03767		2/23/1982	VST	SPR		NE	5N 49E 24	0.030	STK		0	0		NY
156	V03766		2/23/1982	VST	SPR	NE	NE	5N 49E 21	0.030	STK		0	0		NY
156	42522		9/25/1980	PER	STR	SE	SE	1N 50E 07	0.100	MM		0	3	MGA	NY
156	V01517		8/24/1917	VST	SPR	SW	SW	6N 49E 14	2.000	MM		0	0		NY
156	25461	8626	2/6/1970	CER	SPR	SW	NE	6N 49E 23	0.008	MM		0	2.1	MGA	NY
156	25460	8625	2/6/1970	CER	SPR	SW	SW	6N 49E 14	0.020	MM		0	6.3	MGA	NY
156	25459	8624	2/6/1970	CER	SPR	NW	NW	6N 49E 23	0.010	MM		0	2.06	MGA	NY
170	23224	6896	7/5/1966	CER	UG	SE	NE	1S 55E 22	0.010	STK		0	3.65	MGA	LI
170	23513	7498	11/22/1966	CER	UG	SE	NE	2S 56E 06	0.010	STK		0	3.65	MGA	LI
170	23232	6904	7/5/1966	CER	UG	SE	NE	2S 56E 06	0.009	STK		0	2.19	MGA	LI

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
170	23219	6892	7/5/1966	CER	UG	SW	SW	3S 55E 07	0.006	STK		0	1.46	MGA	LI
170	12542	3217	7/15/1948	CER	UG	SW	SE	2S 55E 17	0.008	STK		0	1.82	MGA	LI
170	11334	2950	7/16/1945	CER	UG	SE	NW	2S 55E 31	0.008	STK		0	1.82	MGA	LI
170	58425	14742	12/24/1992	CER	UG	SW	NE	4S 55E 02	1.000	IRR		31.42	157.1	AFA	LI
170	58424	14741	12/24/1992	CER	UG	SW	NE	4S 55E 02	1.200	IRR		97.5	487.5	AFA	LI
170	56328	14475	5/17/1991	CER	UG	SW	SW	3S 54E 24	1.320	IRR	Y	125	52	AFA	LI
170	45902	13328	7/9/1982	CER	UG	SW	NW	3S 55E 34	2.670	IRR		134.6	673	AFA	LI
170	42569	15416	10/1/1980	CER	UG	NW	SW	3S 55E 31	4.200	IRR		250	1250	AFA	LI
170	36458	13497	1/15/1979	CER	UG	SW	SE	3S 55E 28	2.010	IRR		125	510	AFA	LI
170	36457	13496	1/15/1979	CER	UG	SW	SE	4S 55E 05	0.170	IRR	Y	10	50	AFA	LI
170	36456	13495	1/15/1979	CER	UG	SW	SE	4S 55E 05	0.200	IRR	Y	24	120	AFA	LI
170	36455	13494	1/15/1979	CER	UG	SW	SE	4S 55E 05	2.390	IRR	Y	185.8	929	AFA	LI
170	36454	13493	1/15/1979	CER	UG	SW	SE	4S 55E 05	0.970	IRR	Y	30.2	151	AFA	LI
170	36451	13491	1/15/1979	CER	UG	SW	SW	3S 55E 28	4.020	IRR		250	1250	AFS	LI
170	36447	13490	1/15/1979	CER	UG	SW	SE	3S 54E 24	2.230	IRR	Y	125	510	AFS	LI
170	36446	13489	1/15/1979	CER	UG	SW	NE	3S 54E 24	0.440	IRR	Y	20	145	AFS	LI
170	36445	13488	1/15/1979	CER	UG	SW	NE	3S 54E 24	0.380	IRR	Y	90	267.21	AFS	LI
170	36443	13486	1/15/1979	CER	UG	SW	NW	3S 54E 24	0.490	IRR	Y	15	145	AFS	LI
170	36441	13484	1/15/1979	CER	UG	SW	NW	3S 54E 24	0.490	IRR	Y	90	267.21	AFS	LI
170	36440	13483	1/15/1979	CER	UG	SW	SW	3S 54E 24	0.040	IRR	Y	5	25	AFA	LI
170	36437	13482	1/15/1979	CER	UG	SW	SW	3S 54E 24	0.490	IRR	Y	90	267.21	AFS	LI
170	V01526		11/30/1917	VST	SPR	SW	NW	1N 56E 10	0.500	STK		0	0	*	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
170	V01600		12/20/1918	VST	SPR	NE	NW	1N 56E 10	0.100	STK		0	0		LI
170	54894	14636	6/1/1990	CER	SPR	SW	NE	1N 55E 05	0.006	STK		0	1.46	MGA	LI
170	46197	13924	10/7/1982	CER	SPR	NE	NW	2S 54E 04	0.010	STK		0	2.95	MGA	NY
170	24420	8037	3/26/1968	CER	SPR	SW	SE	1S 57E 06	0.009	STK		0	2.19	MGA	LI
170	23229	6902	7/5/1966	CER	STR	SE	NE	1S 56E 17	0.006	STK		0	1.46	MGA	LI
170	23223	6895	7/5/1966	CER	SPR	SW	SE	1N 55E 08	0.010	STK		0	3.65	MGA	LI
170	23222	6894	7/5/1966	CER	SPR	SW	SW	1N 55E 10	0.006	STK		0	1.46	MGA	LI
170	23221	6893	7/5/1966	CER	SPR	SW	SW	1N 55E 10	0.006	STK		0	1.46	MGA	LI
170	23220	6923	7/5/1966	CER	STR	SW	NW	2S 54E 16	0.006	STK		0	1.46	MGA	NY
170	10974	2877	8/4/1943	CER	SPR	NE	NW	1S 56E 12	0.007	STK		0	1.53	MGS	LI
170	2628	183	1/31/1913	CER	SPR	SE	NE	1N 55E 09	0.010	STK		0	2.36	MGA	LI
170	2424	217	5/8/1912	CER	STR	NW	NW	1N 55E 08	0.020	STK		0	2.87	MGS	LI
170	1433	105	9/20/1909	CER	STR	NW	NE	1N 55E 08	0.190	IRR		8	32	AFS	LI
170	V01524		11/30/1917	VST	SPR	SE	SE	2S 55E 26	0.500	STK		0	0		LI
170	V01508		5/16/1917	VST	SPR	SW	SE	2S 57E 28	0.100	STK		0	0		LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
171	62615		11/22/1996	PER	UG	SW	SW	1N 59E 21	0.008	STK		0	1.98	MGA	LI
171	54216	15954	12/6/1989	CER	UG	SW	SW	1S 60E 08	0.010	STK		0	2.34	MGA	LI
171	V01540		2/5/1918	VST	SPR	SE	NW	1N 59E 13	0.100	STK		0	0.37	MGA	LI
171	V01606		3/5/1919	VST	SPR	SW	SE	3S 58E 01	0.020	STK		0	0		LI
171	V01509		5/17/1917	VST	SPR	NE	SE	3S 58E 12	0.100	STK		0	0		LI
171	V01605		3/5/1919	VST	SPR	NE	SE	1N 60E 01	0.020	STK		0	0		LI
171	V01266		11/20/1913	VST	SPR			1S 60E 02	0.050	STK		0	0		LI
172	9922	2297	12/18/1935	CER	UG	SW	SW	2S 57E 10	0.003	STK		0	0.79	MGA	LI
172	8380	1973	11/9/1927	CER	UG	NW	SE	1N 57E 20	0.010	STK		0	3.07	MGA	LI
172	2911	302	3/16/1914	CER	UG	SE	NW	4N 58E 31	0.006	STK		0	1.46	MGA	NY
172	8490	2870	3/29/1928	CER	UG	SE	SE	5N 59E 31	0.003	STK		0	0.73	MGA	NY
172	2912	303	3/16/1914	CER	UG	SE	NW	4N 58E 23	0.006	STK		0	1.46	MGA	NY
172	V01539		2/5/1918	VST	SPR	NE	SW	1N 58E 02	0.001	STK		0	0.12	MGS	LI
172	V01541		2/5/1918	VST	SPR	NW	NE	2N 57E 07	0.100	STK		0	1.1	MGA	NY
172	V01156		11/26/1912	VST	STR	SE	NW	2N 56E 03	0.000	IRR		4.38	13.14	AFS	NY
172	V01155		7/26/1912	VST	STR	NE	SW	3N 56E 36	0.000	IRR		38.31	153.24	AFS	NY
172	V01154		7/26/1912	VST	STR	SW	SW	3N 57E 15	0.000	IRR		6.99	27.96	AFS	NY
172	V01153		7/26/1912	VST	STR	SW	SE	3N 57E 16	0.000	IRR		22.3	89.2	AFS	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
172	V01152		7/26/1912	VST	STR	SE	SW	3N 57E 08	0.000	IRR		44.87	179.48	AFS	NY
172	V01150		11/26/1912	VST	SPR	SW	SW	4N 57E 35	0.000	IRR		10.9	43.6	AFA	NY
172	11374	3145	9/17/1945	CER	SPR	NW	NW	2N 56E 23	0.003	STK		0	0.73	MGA	LI
172	10467	2956	1/29/1940	CER	SPR	NE	SW	2N 57E 07	0.009	STK		0	2.12	MGA	LI
172	10167	2697	9/13/1937	CER	STR	SE	SE	2N 56E 11	1.000	IRR		100	424	AFS	NY
172	9843	2583	3/11/1935	CER	STR	SE	SW	2N 57E 06	0.170	IRR		17.83	86	AFA	NY
172	8379	1906	11/9/1927	CER	STR	SE	NW	2N 57E 19	0.003	STK		0	0.47	MGS	LI
172	7252	1860	11/21/1924	CER	SPR	NE	SW	2N 57E 07	0.006	STK		0	1.46	MGA	LI
172	6679	2234	5/19/1922	CER	STR	SW	SE	2N 57E 21	0.010	STK		0	4.35	MGA	LI
172	6047	1137	4/3/1920	CER	SPR	SW	NW	3N 57E 14	0.070	STK		0	6.06	MGS	NY
172	5786	2265	10/1/1919	CER	STR	NE	SW	3N 56E 36	0.170	IRR		17	66.65	AFS	NY
172	4857	942	1/22/1918	CER	SPR	SE	NE	1N 57E 24	0.010	STK		0	3.54	MGA	LI
172	4799	1048	12/22/1917	CER	STR	NE	SW	3N 57E 16	0.070	IRR		7.29	29.16	AFS	NY
172	4635	1567	10/13/1917	CER	STR	SW	NW	3N 57E 14	0.290	IRR		29	141.25	AFS	NY
172	4563	818	8/24/1917	CER	STR	SE	SW	3N 56E 36	0.140	IRR		14.68	44.04	AFS	NY
172	2715	392	5/16/1913	CER	STR	SE	SW	3N 57E 08	0.190	IRR		19.56	78.81	AFS	NY
172	1703	447	6/1/1910	CER	STR	SE	SE	2N 56E 03	0.520	IRR		52.17	208.7	AFS	NY
181	6718	1629	7/17/1922	CER	UG	SW	SW	1N 66E 32	0.030	MM		0	5.89	MGA	LI
181	35773	10870	8/18/1978	CER	UG	SE	NW	3N 64E 20	0.000	STK		0	1.04	MGA	LI
181	18756	5059	4/26/1960	CER	UG	NE	NW	1N 64E 24	0.020	STK		0	3.53	MGA	LI
181	V01459		4/12/1916	VST	SPR	SE	SW	2S 66E 33	0.130	STK		0	1.1	MGS	LI
181	V01787		1/27/1922	VST	SPR	NE	SW	2S 66E 33	0.030	STK		0	2.19	MGA	LI
181	V01268		11/20/1913	VST	SPR	SE	SW	2N 63E 13	0.010	STK		0	3	MGA	LI
181	V01267		11/17/1913	VST	SPR	NE	SW	1N 63E 21	0.100	STK		0	2.19	MGA	LI
181	V01265		11/17/1913	VST	SPR		SW	1N 63E 28	0.050	STK		0	0.73	MGA	LI
181	14732	4712	12/24/1952	CER	STR	SW	NW	2S 66E 17	0.000	STK		0	1.3	MGS	LI
181	12247	3584	2/6/1948	CER	SPR	NW	NW	2N 63E 35	0.010	STK		0	1.46	MGA	LI
181	12246	3583	2/6/1948	CER	SPR	SW	SE	2N 63E 34	0.010	STK		0	1.7	MGS	LI
181	7564	2210	11/4/1925	CER	SPR	SE	NW	1N 63E 22	0.010	STK		0	1.58	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
181	7563	2209	11/4/1925	CER	SPR	SE	NE	1N 63E 22	0.010	STK		0	0.85	MGA	LI
181	7117	1466	5/16/1924	CER	SPR	NW	SW	2N 63E 13	0.000	STK		0	0.51	MGA	LI
181	6619	835	1/27/1922	CER	SPR	NE	SW	2S 66E 33	0.020	STK		0	3.5	MGA	LI
181	V06519		5/19/1994	VST	SPR	NW	NW	1N 65E 35	0.050	STK		0	0		LI
197	50135	12420	8/29/1986	CER	UG	NW	SE	3S 71E 07	0.003	STK		0	0.71	MGA	LI
197	18010	5282	5/20/1959	CER	UG	SE	NW	2S 71E 21	0.003	STK		0	0.37	MGS	LI
197	64710		12/17/1998	PER	UG	NE	NE	1S 71E 04	0.250	MM	Y	0	64.89	AFA	LI
197	V04307		5/3/1985	VST	SPR	NW	NW	2S 70E 27	0.002	STK		0	0		LI
197	50137	12422	8/29/1986	CER	RES		LT01	3S 70E 02	0.010	STK		0	3.65	MGA	LI
197	50136	12421	8/29/1986	CER	RES		LT09	3S 71E 04	0.006	STK		0	3.65	MGA	LI
203	69429		12/26/2002	PER	UG	NW	SW	3S 67E 10	0.003	QM		0	0.73	MGA	LI
203	63148	15397	5/28/1997	CER	UG	NE	NE	2S 68E 07	0.004	IRR	Y	77.8	1.29	AFS	LI
203	67840		7/25/2001	PER	UG	NE	NW	2S 68E 21	0.010	STK		0	2.92	MGA	LI
203	49055	14453	5/17/1985	CER	UG	NW	NW	2S 68E 17	0.003	STK		0	0.73	MGA	LI
203	4692	705	11/10/1917	CER	UG	SW	SW	1S 67E 32	0.010	STK		0	3.93	MGA	LI
203	40152	12708	12/20/1979	CER	UG	SW	SW	4S 67E 05	0.060	OTH		0	0	*	LI
203	37106	10771	3/20/1979	CER	UG	NW	NW	4S 67E 08	0.020	OTH		0	2.37	MGA	LI
203	37105	10144	3/20/1979	CER	UG	NW	NW	4S 67E 08	0.020	OTH		0	2.59	MGA	LI
203	37104	10655	3/20/1979	CER	UG	NW	NW	4S 67E 08	0.020	OTH		0	2.38	MGA	LI
203	66105		2/28/2000	PER	UG	NE	NW	2S 69E 07	0.001	WLD		0	0.87	AFA	LI
203	V01518		8/30/1917	VST	SPR	SW	NE	3S 69E 19	0.000	STK		0	0		LI
203	V09448		5/17/2004	VST	SPR	NW	SE	2S 69E 34	0.005	WLD		0	0	AFA	LI
203	V04352		5/22/1985	DEC	SPR			2S 68E 17	1.830	DEC		73.2	366	AFS	LI
203	V04281		4/23/1985	DEC	SPR		SE	2S 68E 05	0.006	DEC		0	0	AFA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
203	V03030		6/16/1978	VST	SPR	SE	SW	2S 67E 07	0.010	STK		0	0		LI
203	V03029		6/16/1978	VST	SPR	SE	SW	2S 67E 07	0.100	IRR		8	32	AFA	LI
203	V01547		3/14/1918	VST	STR	NW	NW	3S 69E 27	0.000	STK		0	0		LI
203	V01546		3/14/1918	VST	SPR	SW	SE	3S 69E 21	0.000	STK		0	0		LI
203	3353	1273	4/19/1915	CER	SPR	SE	NW	2S 68E 04	3.880	IRR		388.12	1164.36	AFS	LI
203	6683	1850	5/22/1922	CER	SPR	NE	NW	2S 68E 04	0.230	IRR		49.51	100.63	AFS	LI
203	6295	1282	10/7/1920	CER	SPR	NW	SE	3S 69E 20	0.006	STK		0	1.42	MGA	LI
203	5881	986	11/28/1919	CER	SPR	SE	NW	2S 67E 05	0.003	STK		0	0.71	MGA	LI
203	5664	1202	8/11/1919	CER	STR	SW	SE	3S 67E 29	0.490	IRR		59.2	265.68	AFS	LI
203	4460	1912	6/7/1917	CER	STR	SW	SE	1S 68E 32	0.200	IRR		20	61	AFS	LI
203	3072	824	8/18/1914	CER	STR	SE	NE	2S 67E 25	1.650	IRR		165.7	497.1	AFS	LI
204	13689	4128	4/30/1951	CER	UG	SW	NE	4S 67E 09	0.001	IRR		0	0.26	AFS	LI
204	62293	15427	7/11/1996	CER	UG	SW	SE	4S 70E 32	0.210	IRR		4.2	21	AFS	LI
204	29247	14158	2/28/1975	CER	UG	NE	SE	4S 67E 10	0.050	QM		0	0.73	MGA	LI
204	V01128		8/12/1912	DEC	UG	SW	NE	4S 67E 08	0.250	DEC		0	0		LI
204	V02873		4/30/1976	VST	UG	NE	NW	4S 67E 08	0.000	COM		0	0		LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
204	53912	13935	10/3/1989	CER	UG	NW	SW	3S 71E 31	0.007	STK	Y	0	1.58	MGA	LI
204	49021	12443	4/29/1985	CER	UG	NW	SW	3S 71E 31	0.010	STK	Y	0	1.58	MGA	LI
204	44724	12303	10/29/1981	CER	UG	NW	NE	4S 67E 14	0.003	STK		0	0.35	MGA	LI
204	26762	8207	6/7/1972	CER	UG	SW	NW	4S 67E 09	0.003	STK		0	0.73	MGA	LI
204	57428	14355	4/13/1992	CER	UG	NE	SE	5S 70E 06	0.003	STK		0	0.71	MGA	LI
204	49020	12442	4/29/1985	CER	UG	SW	SE	4S 70E 35	0.010	STK		0	1.58	MGA	LI
204	V01447		2/6/1916	VST	SPR	SE	SE	5S 68E 06	0.050	STK		0	0		LI
204	V05758		4/30/1992	VST	SPR	NE	NW	4S 67E 15	0.050	STK		0	0		LI
204	V04622		11/10/1987	DEC	SPR	NE	NE	4S 67E 19	0.120	DEC		5	25	AFA	LI
204	V04404		5/30/1985	VST	SPR	NE	NW	4S 67E 15	0.001	STK		0	0		LI
204	V02236		5/2/1931	DEC	STR	SW	NW	4S 67E 12	0.170	DEC		7.1	35.5	AFA	LI
204	62463	15297	9/18/1996	CER	SPR		LT02	4S 69E 02	0.002	STK		0	0.55	MGA	LI
204	8877	2237	4/21/1929	CER	SPR	NW	NE	4S 68E 26	0.003	STK		0	0.58	MGA	LI
204	V01691		4/16/1920	DEC	SPR	SW	NE	5S 69E 11	0.280	DEC		11.43	57.15	AFA	LI
204	R04292		5/3/1985	DEC	SPR	NW	NW	5S 68E 11	0.002	DEC		0	0	MGA	LI
204	R04291		5/3/1985	DEC	SPR	SE	NW	5S 68E 11	0.001	DEC		0	0	MGA	LI
204	4337	1568	3/2/1917	CER	SPR	SE	NE	5S 68E 12	0.100	STK		0	0		LI
204	V01477		12/1/1916	DEC	SPR	SE	NW	5S 69E 14	1.160	DEC		46.7	233.5	AFA	LI
204	V01476		12/1/1916	DEC	SPR	NW	NW	5S 69E 14	1.480	DEC		59.25	296.25	AFA	LI
204	V01475		12/1/1916	DEC	SPR	NE	SW	5S 69E 13	0.460	DEC		18.5	92.5	AFA	LI
204	V01474		12/1/1916	DEC	SPR	NW	SW	5S 69E 14	2.210	DEC		88.5	442.5	AFA	LI
204	V01803		8/25/1922	DEC	STR	NW	SW	5S 69E 13	0.470	DEC		18.9	94.5	AFA	LI
204	V01690		4/16/1920	DEC	SPR	NW	SW	5S 69E 13	2.150	DEC		86.09	430.5	AFA	LI
204	4614	1270	10/4/1917	CER	SPR	SE	NW	5S 69E 24	0.200	IRR		20	120	AFA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
207	67921		8/17/2001	PER	UG	SW	NW	7N 62E 21	0.070	QM		0	5	AFA	NY
207	55620	16242	1/10/1991	CER	UG	SW	SW	7N 61E 36	0.003	QM		0	0.7	MGA	NY
207	66127		3/8/2000	PER	UG	SE	SW	5N 60E 24	0.010	STK		0	3.65	MGA	NY
207	23590	7240	1/9/1967	CER	UG	NW	NW	6N 61E 06	2.670	IRR	Y	108	432	AFA	NY
207	V01351		1/11/1915	VST	STR	SW	NW	6N 61E 17	0.000	IRR		29000	11600	AFA	NY
207	V04605		7/16/1987	VST	STR	SW	NW	7N 62E 33	7.690	IRR		551.59	2206.38		NY
207	V01151		7/26/1912	VST	SPR	NW	NW	6N 59E 17	0.000	IRR		85.34	341.4	AFA	NY
207	49476	13043	10/23/1985	CER	SPR	SW	NW	7N 62E 33	0.020	QM		0	0.59	MGA	NY
207	19294	5897	10/24/1960	CER	SPR	NW	NW	6N 60E 36	0.090	IRR		13.24	52.97	AFA	NY
208	V02418		8/27/1956	VST	UG	NW	SW	3N 62E 08	0.020	STK		0	0		NY
208	67151		1/19/2001	PER	UG	SE	SW	4N 61E 36	0.010	STK		0	3.65	MGA	NY
208	66124		3/8/2000	PER	UG	NE	SW	3N 62E 17	0.010	STK		0	3.65	MGA	NY
208	7057	1216	2/26/1924	CER	UG	SE	SW	4N 61E 36	0.020	STK		0	2.44	MGS	LI
208	4666	1575	11/1/1917	CER	SPR	NE	SE	1N 62E 05	0.001	STK		0	0.18	MGA	LI
228	6725	1233	7/31/1922	CER	UG	NE	SW	10S 46E 13	0.001	STK		0	0.36	MGA	NY
228	44236	13628	8/5/1981	CER	UG	NW	NE	11S 47E 33	0.090	MM		0	0.28	MGA	NY
228	9606	2295	7/4/1932	CER	UG	SE	SE	10S 49E 17	0.002	STK		0	0.36	MGA	NY
228	V01408		8/10/1915	VST	OSW			11S 47E 21	0.000	OTH		0	0		NY

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
228	54200	15730	11/29/1989	CER	SPR	NE	NE	10S 47E 33	0.530	IRR		7.5	37.5	AFA	NY
228	30294	10705	6/1/1976	CER	SPR	NE	SE	11S 47E 28	0.120	IRR		6.9	34.5	AFA	NY
228	28808	9820	10/15/1974	CER	SPR	NE	NW	11S 47E 33	0.040	IRR		2.5	12.5	AFA	NY
228	12488	3700	6/10/1948	CER	SPR	SW	SE	11S 47E 16	1.000	IRR		17.52	87.59	AFA	NY
228	10664	2947	5/19/1941	CER	SPR	NW	NE	11S 49E 18	0.003	STK		0	0.71	MGA	NY
228	9908	2486	11/1/1935	CER	SPR	SW	NW	11S 47E 10	0.020	IRR		0.25	17.7	AFA	NY
228	1751	311	7/13/1910	CER	SPR	NE	NW	10S 47E 14	0.410	IRR		41	222.63	AFS	NY
229	49903	12034	6/5/1986	CER	SPR	NW	NW	12S 48E 30	0.006	STK		0	1.42	MGA	NY
229	6031	852	3/27/1920	CER	SPR	SW	SE	12S 48E 19	0.006	STK		0	1.42	MGA	NY
173A	V03769		2/23/1982	VST	UG	SW	NE	2S 54E 19	0.030	STK		0	0		NY
173A	45384	11563	2/23/1982	CER	UG	SW	NE	2S 54E 19	0.007	STK		0	1.65	MGA	NY
173A	26597	8655	3/6/1972	CER	UG	SW	SW	1S 54E 09	0.002	STK		0	0.66	MGA	NY
173A	23351	6872	8/25/1966	CER	UG	NE	NW	3N 53E 35	0.002	STK		0	0.47	MGA	NY
173A	13499	3619	9/21/1950	CER	UG	SW	NE	1N 53E 07	0.002	STK		0	0.47	MGA	NY
173A	17211	4848	3/14/1957	CER	UG	NE	SW	1N 53E 32	0.100	OTH		0	2.92	MGA	NY
173A	28912	8841	11/14/1974	CER	UG	NW	NW	2N 52E 36	0.010	STK		0	4.01	MGA	NY
173A	6992	1235	10/18/1923	CER	UG	NE	NE	2N 52E 07	0.003	STK		0	0.71	MGA	NY
173A	V03996		10/7/1982	VST	SPR	SW	SW	1S 52E 08	0.030	STK		0	0		NY
173A	V03995		10/7/1982	VST	SPR	SE	NE	1N 51E 01	0.030	STK		0	0		NY
173A	V03768		2/23/1982	VST	SPR	SE	SW	3N 52E 18	0.030	STK		0	0		NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173A	V03764		2/23/1982	VST	SPR	SE	SE	1N 54E 17	0.030	STK		0	0		NY
173A	V03762		2/23/1982	VST	SPR	SE	SE	1N 54E 17	0.030	STK		0	0		NY
173A	V02157		12/12/1927	VST	SPR	NW	SE	2N 54E 10	0.250	STK		0	0		NY
173A	46193	11457	10/7/1982	CER	SPR	SE	NE	1N 51E 01	0.010	STK		0	4.25	MGA	NY
173A	26501	8133	1/24/1972	CER	SPR	NW	SW	2S 51E 22	0.010	STK		0	3.15	MGA	NY
173A	14486	3932	8/14/1952	CER	STR	SW	SW	1S 51E 18	0.010	STK		0	3.77	MGA	NY
173A	13541	3659	11/16/1950	CER	SPR	NW	NW	2S 51E 16	0.020	STK		0	4.72	MGA	NY
173A	12868	4254	3/25/1949	CER	SPR	SE	NW	2N 54E 34	0.003	STK		0	0.73	MGA	NY
173A	12867	4255	3/25/1949	CER	SPR	NE	NW	1N 54E 02	0.003	STK		0	0.73	MGA	LI
173A	5946	665	1/12/1920	CER	SPR	SW	NE	3N 52E 32	0.003	STK		0	0.73	MGA	NY
173A	2903	288	3/5/1914	CER	SPR	SE	NE	2N 54E 09	0.010	STK		0	0.32	MGA	NY
173A	V03997		10/7/1982	VST	SPR	SW	SW	1N 52E 07	0.030	STK		0	0		NY
173B	45247	11854	1/19/1982	CER	UG	SW	NE	3N 52E 02	0.010	STK		0	4.25	MGA	NY
173B	15247	4623	8/4/1953	CER	UG	NW	SW	3N 54E 05	0.010	STK		0	3.65	MGA	NY
173B	11201	3348	11/10/1944	CER	UG	NW	SW	4N 54E 17	0.010	STK		0	3.65	MGA	NY
173B	69904		4/22/2003	PER	UG	NE	NE	5N 55E 33	3.000	IRR	Y	0	0	AFA	NY
173B	64062		4/24/1998	PER	UG	SE	SE	6N 56E 34	2.700	IRR		160	640	AFA	NY

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173B	57466		4/21/1992	PER	UG	NW	NW	5N 55E 33	5.230	IRR	Y	630	1240	AFA	NY
173B	51129	14757	7/20/1987	CER	UG	NE	SW	6N 56E 23	0.300	IRR		43.8	175.2	AFA	NY
173B	39894	13194	12/5/1979	CER	UG	SW	SW	5N 55E 28	5.800	IRR		297.58	1190.32	AFA	NY
173B	28627		8/20/1974	PER	UG	NW	NE	6N 56E 27	1.000	IRR		40	160	AFA	NY
173B	25203	7999	8/11/1969	CER	UG	SE	NW	6N 56E 23	0.180	IRR	Y	66	133.18	AFA	NY
173B	25202	7998	8/11/1969	CER	UG	SE	NW	6N 56E 23	0.120	IRR	Y	45	86.84	AFA	NY
173B	23856	7731	5/12/1967	CER	UG	SE	NW	6N 56E 27	0.200	IRR		40	144.75	AFA	NY
173B	23855	7730	5/12/1967	CER	UG	SW	NE	6N 56E 27	0.200	IRR		20	80	AFA	NY
173B	23854	7729	5/12/1967	CER	UG	NW	NE	6N 56E 23	0.200	IRR		44	144.75	AFA	NY
173B	21964	7994	4/22/1964	CER	UG	SE	NW	6N 56E 23	0.120	IRR	Y	45	86.84	AFA	NY
173B	V04670		5/27/1988	VST	SPR	NE	SW	4N 52E 12	0.030	STK		0	0		NY
173B	V04669		5/27/1988	VST	SPR	NW	NW	4N 52E 21	0.030	STK		0	0		NY
173B	V04668		5/27/1988	VST	SPR	NW	SE	4N 52E 20	0.030	STK		0	0		NY
173B	52147	15223	5/27/1988	CER	SPR	NE	SW	4N 52E 12	0.003	STK		0	0.78	MGA	NY
173B	52144	15256	5/27/1988	CER	SPR	NW	SE	4N 52E 20	0.002	STK		0	0.52	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173B	52143	15255	5/27/1988	CER	SPR	NW	NW	4N 52E 21	0.008	STK		0	1.84	MGA	NY
173B	11037	2909	12/10/1943	CER	STR	NE	SW	3N 52E 03	0.003	STK		0	0.71	MGA	NY
173B	4533		7/30/1917	PER	STR	NW	SE	3N 52E 03	0.000	IRR		3000	10000	AFS	NY
173B	V04671		5/27/1988	VST	SPR	NW	SW	4N 53E 06	0.030	STK		0	0		NY
173B	V02152		12/8/1927	VST	SPR	NE	SE	3N 54E 25	0.250	STK		0	0		NY
173B	10200	2760	1/26/1938	CER	STR	SE	SW	6N 57E 28	0.110	MM		0	26.18	MGA	NY
173B	2791	408	9/26/1913	CER	STR	NW	NE	4N 56E 20	0.250	MM		0	0	*	NY
173B	1467	261	10/20/1909	CER	STR			5N 56E 35	0.100	IRR		10	72.4	AFA	NY
173B	1178	48	11/7/1908	CER	STR		NW	4N 55E 29	0.300	IRR		26.86	0		NY
227A	21593	5760	10/31/1963	CER	UG	SW	SW	15S 50E 18	0.020	DOM		0	5.26	MGA	NY
227A	18528	5479	1/19/1960	CER	UG	SE	SW	15S 50E 18	0.030	COM		0	8.14	MGA	NY
227A	11141	3172	7/19/1944	CER	UG	NE	NW	12S 51E 18	0.008	STK		0	1.84	MGA	NY
141	54929		6/6/1990	PER	UG	SE	SE	4N 44E 05	1.000	MUN		0	235.9	MGA	NY
141	45221	12822	1/14/1982	CER	UG	SE	NE	4N 44E 18	0.280	MUN		0	27.21	MGA	NY
141	45151	12821	12/21/1981	CER	UG	NW	NE	4N 44E 08	1.130	MUN		0	117.1	MGA	NY
141	45150	12820	12/21/1981	CER	UG	SW	SW	4N 44E 08	0.530	MUN		0	45.59	MGA	NY
141	45149	12819	12/21/1981	CER	UG	SE	SE	4N 44E 18	0.370	MUN		0	44.55	MGA	NY
141	45148	12818	12/21/1981	CER	UG	SE	NE	4N 44E 18	0.370	MUN		0	36	MGA	NY
141	64331		7/22/1998	PER	UG	SW	NW	4N 43E 31	1.000	IND		0	108.75	AFA	NY
142	52749		12/1/1988	PER	UG	NE	NW	2N 42E 35	0.500	MM		0	117.8	MGA	ES
142	42606	11265	10/9/1980	CER	UG	NE	NE	1N 42E 30	0.470	MM		0	13.36	MGA	ES
142	316	532X	12/17/1906	CER	UG	N2	NE	1S 41E 16	10.000	MM		0	182.5	MGA	ES

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
142	21314	6200	6/3/1963	CER	UG	SE	SW	3S 42E 02	0.300	MUN		0	0.2	MGA	ES
142	21160	6221	3/25/1963	CER	UG	NW	SW	3S 42E 02	0.300	MUN		0	0.2	MGA	ES
142	21159	6220	3/25/1963	CER	UG	SW	SW	3S 42E 02	0.110	MUN		0	0.07	MGA	ES
142	21158	6219	3/25/1963	CER	UG	SE	SW	3S 42E 02	0.350	MUN		0	0.24	MGA	ES
142	21157	6218	3/25/1963	CER	UG	SE	SW	3S 42E 02	0.250	MUN		0	0.17	MGA	ES
142	20552	6982	7/9/1962	CER	UG	SW	SW	3S 42E 02	0.250	MUN		0	0.17	MGA	ES
142	10150	2795	8/10/1937	CER	UG	NW	SW	3S 42E 02	0.250	MUN		0	0.17	MGA	ES
144	64503		10/5/1998	PER	UG	SW	SW	5S 40E 36	0.240	COM		0	167.96	AFA	ES
144	1283	205	2/8/1909	CER	SPR	SE	SE	5S 40E 36	0.500	MM		0	117.92	MGA	ES
144	1283	205	2/8/1909	CER	SPR	SE	SE	5S 40E 36	0.500	MM		0	117.92	MGA	ES
144	5918	574	12/22/1919	CER	SPR	SW	NW	5S 40E 35	0.250	OTH		0	0		ES
144	5918	574	12/22/1919	CER	SPR	SW	NW	5S 40E 35	0.250	OTH		0	0		ES
146	24785	8340	12/2/1968	CER	UG	NW	NW	7S 44E 34	2.700	IRR		160	800	AFS	NY
146	65773		1/3/2000	PER	UG	NW	SW	8S 43E 23	1.000	MM		0	129.78	AFA	NY
146	57961		8/12/1992	PER	UG	SE	NE	8S 44E 11	0.250	QM		0	1	MGA	NY
149	57306	14639	3/17/1992	CER	UG	NE	NW	4N 48E 05	1.560	IRR	Y	102.06	203.24	AFA	NY
149	55783	14139	2/7/1991	CER	UG	NE	NW	4N 48E 05	1.000	IRR	Y	51.25	205	AFA	NY
149	50738	14211	3/24/1987	CER	UG	NW	SW	4N 48E 08	1.400	IRR		78.8	315.2	AFA	NY
156	18354	5616	9/24/1959	CER	UG	SE	SE	4N 51E 03	2.000	IRR		20	80	AFS	NY
156	59707	15994	1/18/1994	CER	UG	SW	NE	5N 50E 13	2.000	IRR		143	572	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	59706	15461	1/18/1994	CER	UG	NW	NE	5N 50E 13	2.170	IRR		141.3	565.2	AFA	NY
156	37398	12595	3/30/1979	CER	UG	SW	SE	5N 50E 13	3.000	IRD		148	592	AFA	NY
156	37391	13133	3/30/1979	CER	UG	SE	NE	5N 50E 13	3.000	IRD		148	592	AFA	NY
170	38960		9/5/1979	PER	UG	SW	SW	3S 55E 30	2.000	QM	Y	0	391.02	MGA	LI
170	38959		9/5/1979	PER	UG	SW	SW	3S 55E 19	3.260	QM	Y	0	436.64	MGA	LI
170	38958		9/5/1979	PER	UG	SW	NW	3S 55E 30	2.300	QM	Y	0	391.02	MGA	LI
170	68277		12/10/2001	PER	UG	NW	NE	3S 55E 33	1.880	IRR		0	625	AFA	LI
170	58423	14834	12/24/1992	CER	UG	SW	SE	3S 55E 33	2.360	IRR	Y	133.5	400	AFA	LI
170	58422	14833	12/24/1992	CER	UG	SW	SE	3S 55E 33	0.160	IRR	Y	133.5	112.5	AFA	LI
170	58421	14832	12/24/1992	CER	UG	SW	SE	3S 55E 33	0.520	IRR	Y	133.5	155	AFA	LI
170	58342	15495	11/20/1992	CER	UG	SW	SW	3S 55E 29	1.000	IRR	Y	60	300	AFA	LI
170	58341	15494	11/20/1992	CER	UG	SW	SW	3S 55E 29	2.100	IRR	Y	136	680	AFA	LI
170	58340	15493	11/20/1992	CER	UG	SW	SW	3S 55E 29	0.980	IRR	Y	54	270	AFA	LI
170	56331	14478	5/17/1991	CER	UG	SW	NW	3S 54E 24	0.110	IRR	Y	125	79.5	AFA	LI
170	56330	14477	5/17/1991	CER	UG	SW	SE	3S 54E 24	0.250	IRR	Y	125	95	AFA	LI
170	56329	14476	5/17/1991	CER	UG	SW	SW	3S 54E 24	0.110	IRR	Y	125	79.5	AFA	LI
170	56327	14474	5/17/1991	CER	UG	SW	NE	3S 54E 24	0.250	IRR	Y	125	95	AFA	LI
170	42570	13500	10/1/1980	CER	UG	SW	SW	3S 54E 24	0.500	IRR	Y	30	150	AFA	LI
170	36460	13499	1/15/1979	CER	UG	SW	NW	3S 55E 33	1.990	IRR		125	625	AFA	LI

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
170	36453	13492	1/15/1979	CER	UG	SW	SW	3S 55E 33	1.990	IRR		125	625	AFA	LI
170	36444	13487	1/15/1979	CER	UG	SW	NE	3S 54E 24	1.040	IRR	Y	15	99	AFA	LI
170	36442	13485	1/15/1979	CER	UG	SW	NW	3S 54E 24	1.180	IRR	Y	20	99	AFA	LI
172	18644	6129	3/11/1960	CER	UG	NW	SW	3N 57E 16	2.000	IRR		81.81	327.26	AFS	NY
203	67483		5/4/2001	PER	UG	NW	NW	1S 68E 33	0.850	IRR		0	116	AFS	LI
203	64992		3/29/1999	PER	UG	SE	SE	1S 68E 32	0.110	IRR	Y	12.45	44.03	AFS	LI
203	64991		3/29/1999	PER	UG	SW	SW	1S 68E 33	0.260	IRR	Y	12.45	49.8	AFS	LI
203	63149	15398	5/28/1997	CER	UG	SE	SE	2S 68E 06	1.400	IRR	Y	77.8	278.86	AFS	LI
203	50714	13652	3/20/1987	CER	UG	SW	NE	2S 67E 35	0.390	IRR		8	40	AFS	LI
203	49320	14827	8/30/1985	CER	UG	SE	SE	1S 68E 32	0.880	IRR	Y	106.8	333.69	AFS	LI
203	22576	7597	5/7/1965	CER	UG	SE	SE	2S 68E 05	0.270	IRR		6.9	34.5	AFS	LI
203	20851	7614	11/15/1962	CER	UG	NE	SW	3S 67E 28	2.000	IRR		74.59	373	AFS	LI
203	20154	6328	11/13/1961	CER	UG	SW	SE	2S 68E 19	1.000	IRR		60	300	AFS	LI
203	19328	6789	11/14/1960	CER	UG	SE	NE	2S 67E 35	3.230	IRR		159.4	797	AFS	LI
203	16912	5794	4/19/1956	CER	UG	SE	NE	1S 68E 32	2.000	IRR		91.5	457.5	AFS	LI
203	16435	5793	5/2/1955	CER	UG	NW	NW	1S 68E 33	1.720	IRR		100	500	AFS	LI
203	14193	4869	4/2/1952	CER	UG	NE	SW	2S 67E 25	3.000	IRR		47.66	187	AFS	LI
203	13047	4048	9/15/1949	CER	UG	SE	SW	2S 68E 05	3.000	IRR		92.7	370.8	AFS	LI
203	13045	3943	9/12/1949	CER	UG	NE	SE	2S 68E 07	0.500	IRR		0	32	AFS	LI
203	12435	4062	5/5/1948	CER	UG	NW	NW	2S 68E 08	1.000	IRR		32.3	161.5	AFS	LI
203	12387	3642	3/29/1948	CER	UG	SE	SW	2S 68E 08	1.500	IRR		100	500	AFS	LI
203	12249	3790	2/9/1948	CER	UG	SW	SW	2S 68E 05	0.500	IRR		20	80	AFS	LI
203	11973	4462	8/22/1947	CER	UG	SW	SW	1S 68E 33	0.980	IRR	Y	106.8	0.48	AFS	LI
203	11968	4868	8/18/1947	CER	UG	SW	SW	2S 68E 19	2.000	IRR		164.27	821.27	AFS	LI
203	11723	3534	11/22/1946	CER	UG	SE	NE	1S 68E 32	0.490	IRR		49.3	178.9	AFS	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
203	11479	3038	1/9/1946	CER	UG	SE	NW	1S 68E 33	0.490	IRR		49.35	223.12	AFS	LI
203	10639	4210	3/24/1941	CER	UG	NE	NE	3S 67E 02	0.560	IRR		55.53	204	AFS	LI
203	V04372		5/21/1985	DEC	STR	NW	SW	1S 68E 27	4.750	DEC		190.8	954	AFA	LI
203	V04353		5/17/1985	DEC	STR	NW	SW	1S 68E 27	0.970	DEC		38.7	193.5	AFA	LI
204	48455		10/4/1984	PER	UG	NW	NW	4S 67E 08	0.250	REC		0	59	MGA	LI
204	12708	7036	11/3/1948	CER	UG	NE	NE	4S 67E 08	1.000	IRR		17.5	70	AFS	LI
204	V04368		5/21/1985	DEC	UG	NE	NE	5S 69E 16	1.520	DEC		61.1	305.5	AFA	LI
204	58264	14556	10/23/1992	CER	UG	SE	NW	4S 70E 33	0.250	IRR		25.6	95.44	AFA	LI
204	55329	15114	9/28/1990	CER	UG	SW	NE	5S 69E 16	1.370	IRR		43.07	215.35	AFA	LI
204	28632	9398	8/22/1974	CER	UG	NE	SW	5S 69E 11	1.200	IRR		0	218.6	AFA	LI
204	10968	2817	7/3/1943	CER	UG	SE	NW	4S 70E 33	0.530	OTH		0	0		LI
204	V04358		5/20/1985	DEC	UG	NE	SW	4S 70E 33	0.340	DEC		0	0	AFA	LI
204	V01473		12/1/1916	DEC	SPR	SW	NW	5S 69E 16	1.000	DEC		40	200	AFA	LI
204	V01472		12/1/1916	DEC	SPR	NE	NE	5S 69E 16	1.530	DEC		61.1	305.5	AFA	LI
204	V04575		9/16/1986	DEC	SPR	NE	NW	4S 70E 33	1.320	DEC		53	265	AFA	LI
204	V04360		5/20/1985	DEC	SPR	SE	NW	5S 68E 11	2.000	DEC		0	0	MGA	LI
204	1363	603	5/24/1909	CER	SPR	SW	NW	5S 68E 11	2.000	OTH		0	471.8	MGA	CL
207	68233		11/28/2001	PER	UG	SW	NW	5N 60E 24	3.500	IRR		0	640	AFA	NY
207	20797	7239	10/19/1962	CER	UG	SW	SW	6N 61E 06	4.450	IRD	Y	90	360	AFA	NY
207	20819	7451	10/30/1962	CER	STR	SW	NW	5N 60E 12	0.000	IRR		218	507	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
207	12517	4130	6/28/1948	CER	STR	NE	NE	5N 60E 23	10.000	IRR		463.3	1853	AFA	NY
207	28209	9425	3/25/1974	CER	SPR	NW	NE	7N 62E 28	2.150	IRR		450	1556.54	AFA	NY
207	13760	4173	6/29/1951	CER	SPR	SE	NW	6N 60E 25	5.000	IRR		378.13	1513	AFA	NY
207	38205	12850	5/17/1979	CER	STR	NW	NW	6N 61E 32	80.000	WLD		0	1230	AFA	WP
207	20466	6663	5/14/1962	CER	STR	NW	SW	6N 61E 10	0.000	WLD		0	3040	AFA	NY
228	54224		12/7/1989	PER	UG	SE	NE	12S 47E 07	0.250	REC	Y	37.02	50	AFA	NY
228	54223		12/7/1989	PER	SPR	SE	NE	12S 47E 07	0.500	REC	Y	37.02	50	AFA	NY
229	59124	15164	8/11/1993	CER	UG	NE	NE	15S 48E 01	0.450	MM		0	10	AFA	NY
173A	31590	15784	5/10/1977	CER	UG	NE	NW	2N 53E 19	4.900	IRR		247.52	990.08	AFS	NY
173B	57465		4/21/1992	PER	UG	SE	SE	5N 55E 33	2.400	IRR	Y	630	1280	AFA	NY
173B	39895		12/5/1979	PER	UG	NW	NW	5N 55E 32	6.000	IRR	Y	600	2400	AFA	NY
173B	39893		12/5/1979	PER	UG	NE	SW	5N 55E 28	6.000	IRR		600	2400	AFA	NY
173B	27377	9372	3/28/1973	CER	UG	SW	NW	5N 55E 27	5.400	IRR		320	1280	AFA	NY
173B	27217	10519	1/3/1973	CER	UG	SE	SE	5N 55E 34	4.700	IRR		320	1280	AFA	NY
173B	26434	9396	12/13/1971	CER	UG	NW	SW	5N 55E 27	5.400	IRR		320	1280	AFA	NY
173B	26137	10518	5/19/1971	CER	UG	NE	SE	5N 55E 36	2.010	IRR		121.46	485.84	AFA	NY
173B	23252	7289	7/21/1966	CER	UG	SE	SW	5N 55E 34	5.350	IRD		320	1280	AFA	NY
173B	23164	7087	6/6/1966	CER	UG	NE	NE	5N 55E 32	5.260	IRD	Y	320	1280	AFA	NY
173B	22080	7967	7/1/1964	CER	UG	SE	NW	5N 55E 35	2.700	IRR		114	456	AFA	NY
173B	20781	7531	10/16/1962	CER	UG	SW	SE	5N 55E 35	2.700	IRD		160	640	AFA	NY
173B	10601	3062	11/29/1940	CER	STR	SE	SW	6N 57E 27	0.500	MM		0	117.92	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173B	10507	3273	5/18/1940	CER	STR	SW	SE	4N 55E 14	0.780	IRR		78.5	567.32	AFA	NY
141	22929	7370	1/14/1966	CER	UG	NE	SW	3N 43E 36	0.050	QM		0	11.79	MGA	NY
145	5930	849	1/2/1920	CER	SPR	NE	NE	5S 44E 05	0.020	STK		0	5.9	MGA	NY
149	V02366		8/25/1950	VST	UG	NW	NE	1N 46E 09	0.040	STK		0	8.02	MGA	NY
149	V02365		8/25/1950	VST	UG	NE	NW	1N 47E 02	0.040	STK		0	8.02	MGA	NY
149	58114		9/23/1992	PER	UG	NE	NW	1N 48E 11	0.050	STK		0	11.8	MGA	NY
149	58112		9/23/1992	PER	UG	SW	NE	3N 49E 01	0.050	STK		0	11.8	MGA	NY
149	58111		9/23/1992	PER	UG	SW	NW	2N 48E 33	0.050	STK		0	11.8	MGA	NY
149	45862	11451	6/21/1982	CER	UG	SW	NE	4N 49E 32	0.030	STK		0	7.3	MGA	NY
149	13549	4228	11/16/1950	CER	UG	NE	NW	3N 48E 32	0.030	STK		0	7.3	MGA	NY
149	V04684		5/27/1988	VST	SPR	NE	SE	3N 49E 36	0.030	STK		0	7.48	MGA	NY
149	48204	12317	7/13/1984	CER	STR	SW	SE	2N 48E 11	0.050	STK		0	11.8	MGA	NY
149	4311	7184	2/17/1917	CER	SPR	SW	SW	2N 49E 07	0.020	STK		0	5.9	MGA	NY
149	4310	7183	2/17/1917	CER	SPR	NW	NW	2N 49E 17	0.020	STK		0	5.9	MGA	NY
156	V04667		5/27/1988	VST	UG	SW	SW	3N 51E 11	0.030	STK		0	7.55	MGA	NY
156	56690		8/20/1991	PER	UG		LT02	2N 51E 15	0.030	STK		0	7.48	MGA	NY
156	13837	3779	9/13/1951	CER	UG	NE	SW	4N 51E 29	0.030	STK		0	7.55	MGA	NY
156	12581	3385	8/17/1948	CER	UG	SW	NE	3N 50E 15	0.030	STK		0	7.55	MGA	NY
156	V04813		4/4/1989	VST	SPR	NE	SE	2N 50E 19	0.030	STK		0	7.55	MGA	NY
156	V04769		4/4/1989	VST	SPR	NW	NE	2N 50E 21	0.030	STK		0	7.55	MGA	NY
156	V04768		4/4/1989	VST	SPR	SW	NE	2N 50E 21	0.030	STK		0	7.55	MGA	NY
156	V04767		4/4/1989	VST	SPR	SW	NE	2N 50E 28	0.030	STK		0	7.55	MGA	NY
156	V04766		4/4/1989	VST	SPR	SE	NW	2N 50E 32	0.030	STK		0	7.55	MGA	NY
156	V04756		4/4/1989	VST	SPR	NE	SW	2N 50E 06	0.030	STK		0	7.55	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	V04688		5/27/1988	VST	SPR	SW	SE	2N 50E 07	0.030	STK		0	7.55	MGA	NY
156	V04687		5/27/1988	VST	SPR	SW	SE	2N 50E 08	0.030	STK		0	7.55	MGA	NY
156	V04686		5/27/1988	VST	SPR	SW	SE	2N 50E 16	0.030	STK		0	7.55	MGA	NY
156	V04685		5/27/1988	VST	SPR	NE	NW	2N 50E 04	0.030	STK		0	7.55	MGA	NY
156	V04672		5/27/1988	VST	SPR	NW	NW	1N 50E 20	0.030	STK		0	7.48	MGA	NY
156	V03765		2/23/1982	VST	SPR	SW	SE	1N 50E 34	0.030	STK		0	7.55	MGA	NY
156	52823	14000	12/22/1988	CER	SPR	SE	NW	1N 50E 04	0.030	STK		0	7.48	MGA	NY
156	52822	13104	12/22/1988	CER	SPR	SW	NE	1N 50E 05	0.030	STK		0	7.48	MGA	NY
156	52819	13101	12/22/1988	CER	SPR	SW	NW	1N 50E 05	0.030	STK		0	7.48	MGA	NY
156	52818	13100	12/22/1988	CER	SPR	NE	SW	2N 50E 31	0.030	STK		0	7.48	MGA	NY
156	52807	14128	12/22/1988	CER	SPR	SW	NE	2N 50E 21	0.030	STK		0	7.48	MGA	NY
156	52805	14126	12/22/1988	CER	SPR	SW	NE	2N 50E 28	0.030	STK		0	7.48	MGA	NY
156	52804	13097	12/22/1988	CER	SPR	SE	NW	2N 50E 32	0.030	STK		0	7.48	MGA	NY
156	52164		5/27/1988	PER	SPR	SW	SE	2N 50E 07	0.030	STK		0	7.48	MGA	NY
156	52163	15234	5/27/1988	CER	SPR	SW	SE	2N 50E 08	0.030	STK		0	7.3	MGA	NY
156	52151	15226	5/27/1988	CER	SPR	NE	SW	1N 50E 20	0.030	STK		0	7.3	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	52149	15257	5/27/1988	CER	SPR	SE	SE	1N 50E 16	0.030	STK		0	7.3	MGA	NY
156	52148	15224	5/27/1988	CER	SPR	SE	SE	1N 50E 08	0.030	STK		0	7.3	MGA	NY
156	45381		2/23/1982	PER	SPR	NW	NW	4N 49E 12	0.030	STK		0	7.48	MGA	NY
156	45379		2/23/1982	PER	SPR	SW	SE	1N 50E 34	0.030	STK		0	7.48	MGA	NY
156	38846	10715	8/20/1979	CER	SPR	SW	NE	2N 50E 28	0.030	STK		0	7.48	MGA	NY
156	23354	6979	8/25/1966	CER	SPR	NE	SE	2N 50E 22	0.020	STK		0	5.66	MGA	NY
156	17290	4624	6/3/1957	CER	STR	SE	SW	4N 50E 14	0.030	STK		0	7.55	MGA	NY
156	13377	3573	5/15/1950	CER	SPR	SE	SE	1N 50E 10	0.030	STK		0	7.48	MGA	NY
156	13376	3572	5/15/1950	CER	SPR	NE	NE	2N 50E 28	0.030	STK		0	7.55	MGA	NY
170	13500	3620	9/21/1950	CER	UG	SW	SW	1S 54E 09	0.030	STK		0	7.45	MGA	NY
170	4860	530	1/22/1918	CER	SPR	SE	NW	1N 56E 03	0.020	STK		0	7.9	MGA	LI
171	46737	12283	3/16/1983	CER	UG	NW	SW	3N 59E 10	0.030	STK		0	8.1	MGA	LI
171	V01544		2/23/1918	VST	SPR	SE	SE	3N 60E 18	0.100	STK		0	7.3	MGA	NY
171	54215	16359	12/6/1989	CER	OSW	SE	SW	1S 59E 12	0.010	STK		0	11.2	AFA	LI
171	4859	529	1/22/1918	CER	SPR	NW	NE	1N 59E 07	0.020	STK		0	5.9	MGA	LI
172	11047	7177	1/11/1944	CER	UG	NW	NW	1S 57E 02	0.020	STK		0	5.26	MGA	LI
172	V01543		12/22/1917	VST	STR	SW	SE	3N 57E 14	0.500	STK		0	7.3	MGA	NY
172	V01542		12/22/1917	VST	SPR	SW	SE	3N 57E 21	0.100	STK		0	7.3	MGA	NY
172	4865	944	1/24/1918	CER	SPR	SE	SW	1S 58E 16	0.020	STK		0	5.9	MGA	LI
172	4858	943	1/22/1918	CER	SPR	SW	NE	1N 57E 20	0.020	STK		0	5.89	MGA	LI
203	41529	11036	6/16/1980	CER	SPR	SE	NE	1N 66E 35	0.210	MUN		0	8.02	MGA	LI

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
208	2822	213	11/10/1913	CER	SPR		NE	1S 62E 03	0.020	STK		0	5.9	MGA	LI
228	52045	13955	4/27/1988	CER	UG	SE	NW	12S 46E 02	0.330	MUN	Y	0	26.78	MGA	NY
228	52044		4/27/1988	PER	UG	SW	NE	11S 46E 34	1.000	MUN	Y	0	235.91	MGA	NY
228	38126	13951	5/29/1979	CER	UG	SW	NW	11S 46E 26	0.450	MUN	Y	0	45.36	MGA	NY
228	22839	7346	11/4/1965	CER	UG	NW	SE	12S 47E 07	0.520	MUN	Y	0	123.36	MGA	NY
228	22838	7345	11/4/1965	CER	UG	NW	SE	12S 47E 07	0.290	MUN	Y	0	68.4	MGA	NY
228	20890	6728	12/12/1962	CER	UG	SW	SE	12S 47E 06	0.170	MUN	Y	0	40.09	MGA	NY
228	17328	5654	7/10/1957	CER	SPR	NW	SW	11S 46E 26	0.050	QM		0	12.97	MGA	NY
228	17327	5653	7/10/1957	CER	SPR	NE	SW	11S 46E 26	0.050	QM		0	12.97	MGA	NY
173A	45248	11446	1/19/1982	CER	UG	SE	NE	2N 53E 08	0.030	STK		0	7.48	MGA	NY
173A	21315	5763	6/3/1963	CER	UG	NE	SE	2N 53E 22	0.020	STK		0	5.11	MGA	NY
173A	18526	5209	1/18/1960	CER	UG	SW	NE	1S 51E 19	0.030	STK		0	7.3	MGA	NY
173A	13540	3615	11/16/1950	CER	UG	NE	NE	1S 53E 29	0.030	STK		0	7.48	MGA	NY
173A	13498	3618	9/21/1950	CER	UG	SW	SE	1N 53E 03	0.030	STK		0	7.48	MGA	NY
173A	12682	3386	10/8/1948	CER	UG	NW	NW	1N 53E 27	0.030	STK		0	7.48	MGA	NY
173A	11862	3123	5/29/1947	CER	UG	SW	SE	1S 50E 11	0.030	STK		0	7.48	MGA	NY
173A	11860	3797	5/29/1947	CER	UG	SW	SE	1N 53E 31	0.030	STK		0	7.48	MGA	NY
173A	46198	16198	10/7/1982	CER	SPR	SW	SE	1N 54E 17	0.030	STK		0	7.48	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
173A	46195	11459	10/7/1982	CER	SPR	SW	SW	1S 52E 08	0.000	STK		0	7.48	MGA	NY
173A	45377	15483	2/23/1982	CER	SPR	SE	SW	3N 52E 18	0.030	STK		0	7.48	MGA	NY
173A	13542	3660	11/16/1950	CER	SPR	NW	SW	2S 51E 22	0.020	STK		0	5.89	MGA	NY
173A	11863	3844	5/29/1947	CER	SPR	SW	NW	1S 51E 08	0.030	STK		0	7.48	MGA	NY
173B	28911	9791	11/14/1974	CER	UG	NW	NE	4N 53E 32	0.020	STK		0	4.38	MGA	NY
173B	29232	10602	2/20/1975	CER	RES	SE	NW	3N 52E 03	0.000	STK		0	7.66	MGA	NY
173B	11753	3104	1/15/1947	CER	STR	NE	SW	3N 52E 03	0.030	STK		0	7.48	MGA	NY
173B	11701	3103	10/5/1946	CER	STR	NE	NE	4N 53E 31	0.030	STK		0	7.44	MGA	NY
173B	11467	3383	12/21/1945	CER	STR	NE	SW	3N 52E 03	0.030	STK		0	7.48	MGA	NY
227A	12729	3750	11/22/1948	CER	UG	SW	SE	14S 50E 30	0.010	STK		0	3.77	MGA	NY
203	30204	9095	4/30/1976	CER	UG	NE	NW	4S 67E 08	0.100	COM		0	6.13	MGA	LI
203	25711	9153	7/15/1970	CER	UG	SE	SW	4S 67E 05	0.120	COM		0	5.91	MGA	LI
203	24407	11286	3/18/1968	CER	UG	NE	SW	4S 67E 05	0.500	COM		0	5.48	MGA	LI
228	62558		11/1/1996	PER	UG	NE	SW	11S 47E 33	0.090	COM		0	2	AFA	NY
228	62264		6/25/1996	PER	UG	NW	NE	10S 47E 31	0.200	COM		0	5	AFA	NY
228	47342	14114	10/21/1983	CER	UG	SE	SE	11S 47E 28	0.020	COM		0	1.18	MGA	NY
142	22691	7670	7/15/1965	CER	UG	SE	SW	2S 42E 34	0.020	IRR		40	16.29	AFA	ES
142	64822		1/29/1999	PER	UG	NE	SW	2S 42E 26	1.000	MM		0	202	AFA	ES
142	10049	2444	11/4/1936	CER	UG	NE	SE	2S 42E 20	0.070	MM		0	18.16	MGA	ES
146	65756		12/27/1999	PER	UG	NW	NE	8S 44E 10	5.400	IRR		320	1600	AFA	NY
146	65742		12/21/1999	PER	UG	SE	SW	7S 44E 34	0.500	IRR		28.7	140	AFA	NY
146	65620		10/20/1999	PER	UG	NW	NW	8S 44E 11	2.000	IRR		100	500	AFA	NY

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
146	30703	10471	9/30/1976	CER	UG	NE	SW	7S 44E 34	1.240	IRR		15.45	61.8	AFA	NY
146	28186	8836	3/14/1974	CER	UG	NE	NW	8S 44E 02	0.490	IRR		24	120	AFA	NY
149	69434		1/2/2003	PER	UG	SE	NW	3N 48E 09	2.090	IRR	Y	0	256	AFA	NY
149	69336		11/26/2002	PER	UG	SE	NW	3N 48E 09	1.080	IRR	Y	0	256	AFA	NY
149	69335		11/26/2002	PER	UG	SE	NW	3N 48E 09	1.080	IRR	Y	0	192	AFA	NY
149	69334		11/26/2002	PER	UG	SE	NW	3N 48E 09	1.080	IRR	Y	0	256	AFA	NY
149	65215		6/18/1999	PER	UG	SW	SW	3N 48E 09	4.320	IRR	Y	880	1024	AFA	NY
149	65214		6/18/1999	PER	UG	SW	NW	3N 48E 09	4.320	IRR	Y	880	768	AFA	NY
149	65213		6/18/1999	PER	UG	NE	SW	3N 48E 16	2.230	IRR	Y	880	768	AFA	NY
149	64415	16130	8/24/1998	CER	UG	SE	NE	1N 46E 26	2.450	IRR	Y	0	496.2	AFA	NY
149	63103	16129	5/12/1997	CER	UG	SW	NW	1N 46E 24	2.450	IRR		320	498.96	AFA	NY
149	63102	16128	5/12/1997	CER	UG	SW	NE	1N 46E 24	2.450	IRR		320	496.12	AFA	NY
149	63100	16127	5/12/1997	CER	UG	SE	NE	1N 46E 26	2.450	IRR	Y	0	495.32	AFA	NY
149	48406		9/17/1984	PER	UG	SW	SW	3N 48E 03	5.400	IRR		320	1280	AFA	NY
149	22622	7062	6/9/1965	CER	UG	SW	SW	3N 48E 09	0.470	IRR	Y	320	240	AFA	NY
149	22621	7061	6/9/1965	CER	UG	SW	NW	3N 48E 09	0.830	IRR	Y	320	260	AFA	NY
156	3180	388	11/23/1914	CER	SPR	NW	SW	4N 50E 20	0.180	IRR		18	0		NY
156	4485	812	6/30/1917	CER	STR	NW	NE	1N 50E 04	0.480	IRR		48.4	145.2	AFA	NY
172	70669		12/2/2003	PER	UG	NW	SW	2N 58E 14	0.500	IRR		0	88	AFA	LI
172	9820	2582	12/4/1934	CER	SPR	SW	NE	2N 57E 07	0.020	DOM		0	5.89	MGA	NY
203	V04588		3/11/1987	VST	UG	SE	NW	1S 68E 33	0.780	IRR		49.35	0		LI
203	V04399		5/22/1985	DEC	UG	NW	NE	2S 68E 08	1.000	DEC		40	200	AFA	LI
203	V04398		5/22/1985	DEC	UG	SE	NE	2S 68E 08	0.390	DEC		15.75	78.75	AFA	LI
203	V04354		5/17/1985	DEC	UG	SW	SE	2S 67E 35	0.590	DEC		23.9	119.5	AFA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
203	70019		5/9/2003	PER	UG	SW	SW	2S 68E 05	0.880	IRR	Y	0	300	AFA	LI
203	69447		1/6/2003	PER	UG	SE	NW	2S 67E 24	1.970	IRR	Y	0	1426.22	AFA	LI
203	67352		3/19/2001	PER	UG	NW	NE	2S 68E 19	0.550	IRR	Y	0	125	AFA	LI
203	67351		3/19/2001	PER	UG	SW	SE	2S 68E 18	2.780	IRR	Y	0	700	AFA	LI
203	67350		3/19/2001	PER	UG	SW	SE	2S 68E 18	2.500	IRR	Y	0	725	AFA	LI
203	67192		2/5/2001	PER	UG	SE	NE	2S 67E 24	0.200	IRR		8.94	44.75	AFA	LI
203	65704		12/8/1999	PER	UG	SE	SW	2S 67E 13	2.480	IRR	Y	0	1796.89	AFA	LI
203	65703		12/8/1999	PER	UG	NW	NW	2S 67E 24	2.480	IRR	Y	0	1796.89	AFA	LI
203	65702		2/8/1999	PER	UG	NW	SW	2S 67E 13	0.990	IRR	Y	0	723.24	AFA	LI
203	65119		5/13/1999	PER	UG	SE	SW	3S 67E 02	0.250	IRR		0	100.15	AFA	LI
203	61614	15120	10/16/1995	CER	UG	SW	SW	2S 68E 17	2.040	IRR	Y	177.83	571	AFA	LI
203	61613	15119	10/16/1995	CER	UG	NW	SW	2S 68E 17	1.400	IRR	Y	177.83	229.16	AFA	LI
203	61612	15118	10/16/1995	CER	UG	SW	NW	2S 68E 17	0.640	IRR	Y	177.83	89	AFA	LI
203	58579		3/3/1993	PER	UG	SW	NE	2S 68E 05	2.700	IRR	Y	190.21	531.3	AFA	LI
203	58578		3/3/1993	PER	UG	SE	NW	2S 68E 05	2.160	IRR	Y	190.21	531.3	AFA	LI
203	58577		3/3/1993	PER	UG	SW	NW	2S 68E 05	1.750	IRR	Y	190.21	531.3	AFA	LI
203	57680	16181	5/20/1992	CER	UG	SE	NW	3S 67E 22	2.670	IRR	Y	0	1130	AFA	LI
203	57679	16180	5/20/1992	CER	UG	SW	SE	3S 67E 15	2.120	IRR	Y	0	1130	AFA	LI
203	29105	10149	12/24/1974	CER	UG	NE	SE	2S 67E 25	4.020	IRR		128.7	643.5	AFA	LI
203	28235		4/4/1974	PER	UG	NE	SW	2S 67E 25	3.500	IRR		27.8	139	AFA	LI
203	25873	9286	11/27/1970	CER	UG	NW	NE	3S 67E 22	3.340	IRR		334.99	1675	AFA	LI
203	24680	8471	9/9/1968	CER	UG	SE	NW	2S 68E 19	4.800	IRR	Y	219.28	1096.4	AFA	LI
203	24349	7865	2/2/1968	CER	UG	NE	NW	2S 68E 08	0.700	IRR		20	100	AFA	LI
203	24327	14438	1/15/1968	CER	UG	NW	NE	3S 67E 28	1.280	IRR		223.12	1115.6	AFA	LI

Hydrographic Basin Abstracts - CRC Basins

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Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
203	23197	7256	6/24/1966	CER	UG	NE	SW	2S 68E 08	1.400	IRR		64.5	322.5	AFA	LI
203	23105	6670	4/22/1966	CER	UG	NW	SE	3S 67E 02	1.000	IRR		49	245	AFA	LI
203	22935	6793	1/24/1966	CER	UG	SE	SW	2S 67E 24	2.500	IRR		130	650	AFA	LI
203	22477	7554	3/4/1965	CER	UG	NW	NE	3S 67E 22	2.100	IRD		112	560	AFA	LI
203	21452	6863	8/13/1963	CER	UG	SW	SE	2S 67E 26	0.300	IRR		12	60	AFA	LI
203	21237	6811	5/1/1963	CER	UG	SE	NE	2S 67E 24	0.900	IRR	Y	75.3	376.5	AFA	LI
203	21236	6810	5/1/1963	CER	UG	NE	SE	2S 67E 24	0.280	IRR	Y	34	170	AFA	LI
203	21206	6536	4/19/1963	CER	UG	SE	SW	3S 67E 02	0.590	IRR		66.8	233.85	AFA	LI
203	21038	6703	2/12/1963	CER	UG	NW	NW	2S 68E 17	0.680	IRR		37.2	186	AFA	LI
203	21037	6701	2/12/1963	CER	UG	SW	NE	3S 67E 02	0.930	IRR		56	280	AFA	LI
203	20264	6792	1/24/1962	CER	UG	NW	NE	2S 67E 25	1.280	IRD		96.2	481	AFA	LI
203	19790	6748	4/28/1961	CER	UG	SW	SW	2S 67E 25	2.050	IRD		88.4	442	AFA	LI
203	19789	6747	4/28/1961	CER	UG	NE	SE	2S 67E 26	1.150	IRD		88.4	442	AFA	LI
203	19788	6790	4/28/1961	CER	UG	NW	SW	2S 67E 25	1.000	IRD		22.7	113.5	AFA	LI
203	19753	6077	4/17/1961	CER	UG	SE	NE	2S 68E 07	1.000	IRR		40	158.6	AFA	LI
203	19119	415	8/15/1960	CER	UG	SW	SW	2S 68E 08	1.670	IRR		155	620	AFA	LI
203	16721	4847	8/17/1955	CER	UG	SW	NW	2S 68E 08	1.780	IRR		209.3	837.2	AFA	LI
203	14834	5346	2/6/1953	CER	UG	NW	NE	2S 67E 25	1.000	IRR		77.3	386.5	AFA	LI
203	11992	3511	9/1/1947	CER	UG	SW	NW	1S 68E 33	0.400	IRR		40.6	243.6	AFA	LI
203	11724	3744	11/25/1946	CER	UG	SW	NW	2S 68E 08	1.610	IRR		105	420	AFA	LI
203	V04371		5/21/1985	DEC	SPR	NE	NW	2S 68E 04	3.590	DEC		143.7	718.5	AFA	LI
203	V04355		5/17/1985	DEC	STR	NW	NE	2S 68E 19	5.480	DEC		219.8	1099	AFA	LI
203	V04150		5/4/1984	DEC	SPR	NE	NW	2S 68E 04	10.000	DEC		800	4000	AFA	LI
203	10461	2957	12/22/1939	CER	OSW	NE	SE	2S 67E 24	0.480	IRR		47.66	347	AFA	LI
204	11582	3719	5/24/1946	CER	UG	NW	NW	4S 67E 08	1.250	DOM		0	294.98	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
204	V04397		5/16/1985	DEC	UG	NE	NW	4S 67E 08	0.500	DEC		0	0	MGA	LI
204	V04363		5/20/1985	DEC	UG	SW	NE	4S 67E 08	0.670	DEC		0	0	MGA	LI
204	V04362		5/20/1985	DEC	UG	SW	NE	4S 67E 08	1.230	DEC		0	0	MGA	LI
204	V04361		5/20/1985	DEC	UG	SE	NW	4S 67E 08	0.670	DEC		0	0	MGA	LI
204	61675		11/8/1995	PER	UG	NE	SW	3S 70E 36	5.350	IRR		0	1567.42	AFA	LI
204	58004	14499	8/25/1992	CER	UG	NW	SE	4S 67E 10	3.300	IRR		115.1	575.5	AFA	LI
204	24603	7971	7/25/1968	CER	UG	SE	NW	4S 67E 09	1.000	IRR		33.4	167	AFA	LI
204	24602	7970	7/25/1968	CER	UG	SE	NE	4S 67E 09	1.000	IRR	Y	22.2	111	AFA	LI
204	24601	7969	7/25/1968	CER	UG	SE	NE	4S 67E 09	0.440	IRR	Y	22.2	111	AFA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
204	24600	7968	7/25/1968	CER	UG	SE	NE	4S 67E 09	0.150	IRR	Y	22.2	108.4	AFA	LI
204	V04402		5/28/1985	DEC	STR	SE	SW	2S 68E 18	0.006	DEC		0	0		LI
204	V04400		5/22/1985	DEC	STR	SW	NW	4S 67E 12	0.060	DEC		0	0		LI
204	V02235		5/2/1931	DEC	STR	SW	NW	4S 67E 12	0.060	DEC		0	0		LI
204	V01588		2/25/1918	DEC	SPR	SW	NW	4S 67E 11	0.620	DEC		24.8	124	AFA	LI
204	V01284		1/10/1914	DEC	STR	NE	NW	4S 67E 08	2.500	DEC		100	500	AFA	LI
204	V01071		8/1/1910	VST	SPR			4S 67E 08	0.000	IRR		150	0		LI
204	V01595		10/10/1918	DEC	SPR	SE	NE	4S 67E 11	0.330	DEC		13.2	66	AFA	LI
207	68238		11/28/2001	PER	UG	NW	NE	4N 61E 27	3.500	IRR		0	480	AFA	NY
207	68237		11/28/2001	PER	UG	NE	NE	4N 61E 07	3.500	IRR		0	480	AFA	NY
207	68236		11/28/2001	PER	UG	NW	SE	4N 61E 06	3.500	IRR		0	480	AFA	NY
207	68235		11/28/2001	PER	UG	NW	SW	5N 61E 31	3.500	IRR		0	640	AFA	NY
207	68234		11/28/2001	PER	UG	NW	NE	5N 60E 25	3.500	IRR		0	640	AFA	NY
228	12489	3701	6/10/1948	CER	UG	NE	NE	11S 47E 21	0.220	IRR		10.84	54.2	AFA	NY
228	12075	4135	11/15/1947	CER	UG	SW	SE	10S 47E 30	0.070	IRR		4.08	20.4	AFA	NY
228	V04626		12/14/1987	VST	SPR	SW	NE	11S 47E 04	0.000	IRR		95.44	477.2	AFA	NY
228	V04586		2/5/1987	VST	SPR	SE	SW	12S 47E 05	5.000	IRR		0	0		NY
228	V03150		3/27/1979	VST	SPR	NE	SW	11S 47E 04	0.900	IRR		60.72	212.52	AFA	NY
228	V03149		3/27/1979	VST	SPR	SW	NE	11S 47E 04	0.000	IRR		95.44	334.04	AFA	NY
228	V02289		2/20/1937	VST	SPR	NE	NW	11S 47E 10	0.370	IRR		37.8	273.18	AFA	NY
228	V02288		2/20/1937	VST	SPR	NW	SE	11S 47E 10	0.370	IRR		37.8	273.18	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
228	24460	7015	5/3/1968	CER	SPR	NE	NE	10S 47E 33	0.530	IRR		42.5	212.5	AFA	NY
228	23306		8/10/1966	PER	SPR	SE	SW	12S 47E 05	0.750	IRR		400	540	AFA	NY
228	21514		9/11/1963	PER	SPR	SW	NE	10S 47E 33	2.170	IRR		160	427.5	AFA	NY
228	11850	3137	5/17/1947	CER	SPR	NE	NE	11S 47E 28	0.750	IRR		65	299.98	AFA	NY
228	10563	2750	10/1/1940	CER	SPR	NE	NE	11S 47E 18	0.030	DOM		0	16.8	MGA	NY
228	2411	316	4/17/1912	CER	SPR	NW	NE	11S 47E 21	0.400	IRR		40	0		NY
228	270	539	11/3/1906	CER	SPR	NE	NE	10S 47E 31	2.000	IRR		80	400	AFA	NY
228	269	540	11/3/1906	CER	SPR	SE	SE	10S 47E 30	5.000	IRR		80	400	AFA	NY
229	62375		8/9/1996	PER	UG	NW	SW	12S 48E 04	0.500	MM	Y	0	362	AFA	NY
229	60985		3/3/1995	PER	UG	NW	SE	12S 48E 04	0.500	MM	Y	0	362	AFA	NY
229	52847	13788	1/5/1989	CER	UG	NW	SE	12S 48E 04	0.690	MM	Y	0	44.4	MGA	NY
229	51555	13786	11/12/1987	CER	UG	SE	NE	12S 48E 07	0.240	MM	Y	0	2.63	MGA	NY
229	48436		9/26/1984	PER	UG	NE	SE	13S 48E 20	0.590	MM		0	140	MGA	NY
173A	31591	16240	5/16/1977	CER	UG	NE	SW	2N 53E 19	4.010	IRR		320	889.09	AFA	NY
173A	31588	16239	5/10/1977	CER	UG	NE	SW	2N 53E 16	4.230	IRR		320	807.26	AFA	NY
173A	31568	16238	5/10/1977	CER	UG	NE	NW	2N 53E 16	4.010	IRR		320	990.08	AFA	NY
142	60963		2/21/1995	PER	UG	NE	NE	1S 42E 10	1.500	MUN	Y	0	300	AFA	ES
142	55627		1/11/1991	PER	UG	NE	NW	1S 42E 10	1.500	QM	Y	0	48.88	MGA	ES
142	41861	13195	7/22/1980	CER	UG	NE	NE	1S 42E 10	0.180	QM	Y	0	44.35	MGA	ES
142	21162	6222	3/25/1963	CER	UG	SE	NW	3S 42E 11	4.000	MUN		0	2.79	MGA	ES
142	20555	6217	7/9/1962	CER	UG	SW	NW	3S 42E 02	4.000	MUN		0	2.78	MGA	ES
142	20553	6216	7/9/1962	CER	UG	SE	SE	3S 42E 03	2.000	MUN		0	1.39	MGA	ES
142	27309	8754	2/23/1973	CER	SPR	NE	NW	2S 42E 30	0.250	MUN		0	58.98	MGA	ES
146	53898		9/28/1989	PER	UG	NE	SW	7S 44E 28	3.000	QM		0	32.58	MGA	NY
149	58150	14286	9/29/1992	CER	UG	SE	SE	1S 46E 13	1.000	QM	Y	0	150	MGA	NY
149	58149	14285	9/29/1992	CER	UG	NE	SE	1S 46E 13	1.000	QM	Y	0	104.45	MGA	NY
149	56916	14097	11/13/1991	CER	UG	NE	SW	1N 46E 25	0.420	QM	Y	0	7.47	MGA	NY
149	53885	14093	9/25/1989	CER	UG	NW	NE	1S 46E 02	0.890	QM	Y	0	47.87	MGA	NY

Hydrographic Basin Abstracts - CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
156	45380	12752	2/23/1982	CER	UG	NE	SW	4N 50E 20	0.050	QM		0	2.1	MGA	NY
203	69300		11/4/2002	PER	UG	NW	NW	2S 68E 08	1.000	MUN	Y	0	128	MGA	LI
203	62064		4/22/1996	PER	UG	SE	NE	3S 67E 03	0.090	QM		0	12.41	MGA	LI
203	56334		5/20/1991	PER	UG	NW	NE	2S 68E 09	1.000	MUN	Y	0	235.9	MGA	LI
203	48554		11/16/1984	PER	UG	SE	SW	2S 68E 05	1.500	MUN	Y	0	128	MGA	LI
203	38460	11305	6/29/1979	CER	UG	SE	SW	2S 68E 05	0.500	MUN	Y	0	117.95	MGA	LI
203	16431	5580	5/2/1955	CER	UG	SE	SW	2S 68E 05	1.000	MUN	Y	0	723	AFA	LI
204	54597		3/23/1990	PER	UG	SE	NE	4S 67E 08	6.000	QM		0	500	AFA	LI
229	57375		4/2/1992	PER	UG	NW	SW	13S 48E 27	1.000	IND	Y	0	61.38	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
148	4943	1111	3/1/1918	CER	STR	SE	SW	1S 49E 04	0.150	IRR		14.96	44.88	AFS	NY
182	3475	427	6/30/1915	CER	SPR	SW	SE	6S 65E 17	0.030	IRR		12	25.15	AFS	LI
182	V01022		2/6/1911	VST	SPR	SW	SE	6S 64E 36	0.060	STK		0	0.68	MGS	LI
182	51260	12370	9/2/1987	CER	SPR	SW	SE	6S 65E 17	0.010	STK		0	2.45	MGS	LI
182	51259	12369	9/2/1987	CER	SPR	SW	SE	6S 65E 17	0.010	STK		0	2.33	MGS	LI
182	6576	1500	10/13/1921	CER	RES	NW	SW	4S 63E 21	0.010	STK		0	1.62	MGS	LI
182	5318	582	11/20/1918	CER	RES	SW	SE	4S 63E 26	0.010	STK		0	1.3	MGS	LI
182	5316	581	11/20/1918	CER	RES	NW	NE	4S 64E 31	0.000	STK		0	5.11	MGS	LI
198	1748	113	7/11/1910	CER	SPR	NW	SE	1N 70E 25	0.050	IRR		5.5	22	AFS	LI
200	11759	3918	1/23/1947	CER	STR	SW	SW	1N 69E 15	3.500	IRR		270.3	1080	AFS	LI
200	6570	1084	10/4/1921	CER	SPR	NE	SE	1N 71E 06	0.008	STK		0	1.77	MGS	LI
201	21622	6400	1/16/1963	CER	STR	NE	NW	2N 69E 24	0.000	WLD		0	825	AFA	LI
202	63229	16265	7/7/1997	CER	UG	SE	SW	3N 67E 20	0.002	WLD		0	0.32	MGA	LI
202	V04392		5/21/1985	VST	SPR	NW	NW	2N 68E 26	0.020	STK		0	2.36	MGS	LI

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
205	22047	6989	6/15/1964	CER	STR	NW	NE	7S 67E 20	1.500	IRR		0	157.2	AFS	LI
205	6493	1499	6/20/1921	CER	STR	SW	NW	7S 68E 20	0.040	IRR		4	14.65	AFS	LI
205	4974	631	3/23/1918	CER	STR	SE	SW	7S 67E 17	0.080	IRR		8.35	30.1	AFS	LI
205	V04348		5/13/1985	VST	SPR	NW	NE	6S 69E 31	0.020	STK		0	0.91	MGS	LI
205	4338	1569	3/2/1917	CER	RES	SW	SW	7S 68E 17	0.010	STK		0	1.53	MGS	LI
205	4341	1571	2/2/1917	CER	SPR	NW	NW	6S 68E 18	0.010	STK		0	2.06	MGS	LI
205	4340	426	3/2/1917	CER	STR	SE	SE	6S 67E 23	0.020	STK		0	2.21	MGS	LI
205	4339	1570	3/2/1917	CER	RES	SE	SW	7S 68E 05	0.010	STK		0	1.53	MGS	LI
205	47798	13579	3/14/1984	CER	SPR	NE	NW	6S 67E 22	0.010	QM		0	0.72	MGA	LI
209	25907	8525	1/13/1971	CER	UG	NW	SW	4S 60E 23	1.110	WLD		0	401.8	AFA	LI
209	12882	6566	4/21/1929	CER	SPR	NW	SE	4S 60E 14	6.720	IRR		633	2400	AFS	LI
222	V00782		9/2/1910	VST	STR	NW	SE	5S 71E 21	0.000	IRR		27	135	AFS	LI
222	7508	1857	9/19/1925	CER	STR	SW	SE	5S 71E 21	0.340	IRR		34.12	186	AFS	LI
222	V01121		7/6/1912	VST	SPR	NE	SW	6S 70E 14	0.010	STK		0	1.47	MGS	LI
222	V01120		7/5/1912	VST	SPR	SE	SE	6S 71E 06	0.010	STK		0	1.47	MGS	LI
222	V01100		6/3/1912	VST	SPR		NE	7S 69E 12	0.010	STK		0	3.73	MGS	LI
222	V01094		6/3/1912	VST	SPR		NE	7S 69E 12	0.010	STK		0	3.73	MGS	LI
230	62294	15307	7/11/1996	CER	SPR	SW	NE	17S 50E 12	0.001	WLD		0	0.45	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	54259	14394	12/19/1989	CER	SPR	NE	NE	17S 50E 12	0.001	WLD		0	0.51	AFA	NY
230	54251	14351	12/19/1989	CER	SPR	SW	NE	17S 50E 22	0.006	WLD		0	4.54	AFA	NY
230	54250	14408	12/19/1989	CER	SPR	SW	NW	17S 50E 23	0.060	WLD		0	49.95	AFA	NY
230	54249	14343	6/30/1989	CER	SPR	SW	SE	17S 50E 21	0.010	WLD		0	2.5	AFA	NY
230	53637	14387	6/30/1989	CER	SPR	NW	NE	17S 50E 22	0.310	WLD		0	225	AFA	NY
230	53636	14406	6/30/1989	CER	SPR	SW	NW	17S 50E 23	0.080	WLD		0	50	AFA	NY
230	53615	14344	6/30/1989	CER	SPR		LT12	17S 50E 10	0.090	WLD		0	65.16	AFA	NY
230	53611	14326	6/30/1989	CER	SPR	SE	NE	17S 50E 09	0.330	WLD		0	140	AFA	NY
230	53610	14325	6/30/1989	CER	SPR	SE	NE	17S 50E 09	0.630	WLD		0	456	AFA	NY
230	53608	14349	6/30/1989	CER	SPR	NW	SE	17S 50E 21	0.020	WLD		0	12	AFA	NY
230	53606	14348	6/30/1989	CER	SPR	SW	NE	17S 50E 21	0.010	WLD		0	8.06	AFA	NY
230	53605	14400	6/30/1989	CER	SPR	SW	NW	17S 50E 23	0.060	WLD		0	49.95	AFA	NY
230	53604	14350	6/30/1989	CER	SPR	SW	NE	17S 50E 22	0.006	WLD		0	4.54	AFA	NY
230	53603	14341	6/30/1989	CER	SPR	SW	SE	17S 50E 21	0.010	WLD		0	2.5	AFA	NY
230	53599	14393	6/30/1989	CER	SPR	NE	NE	17S 50E 12	0.001	WLD		0	0.58	AFA	NY
155C	12754	3857	12/7/1948	CER	OSW	SW	SE	6N 53E 10	0.001	STK		0	0.6	MGS	NY
155C	12753	3856	12/7/1948	CER	OSW	SW	SE	7N 53E 32	0.001	STK		0	0.6	MGS	NY
169A	4746	1983	11/26/1917	CER	SPR	SE	NW	4S 58E 27	0.001	STK		0	0.27	MGS	LI
143	13255	4037	2/3/1950	CER	SPR	NW	SW	1S 40E 30	0.005	REC		0	1.18	MGA	ES
148	4910	1066	2/16/1918	CER	SPR	NW	SW	1N 49E 23	0.300	IRR		30	144	AFS	NY
198	57149		2/5/1992	PER	UG	NW	NE	1N 69E 32	0.600	REC		0	3	MGA	LI
198	34094	10059	10/13/1977	CER	UG	NW	NE	1N 69E 32	0.600	REC		0	0.31	MGA	LI
198	12963	4275	6/11/1949	CER	STR	SW	SE	1S 69E 06	3.000	IRR		261	832	AFS	LI
198	7005	2106	11/19/1923	CER	STR	SW	SE	1S 69E 06	1.190	IRR		119.24	432.05	AFS	LI
201	34093	10058	10/13/1977	CER	UG	NW	NW	2N 69E 24	0.010	REC	Y	0	0.28	MGA	LI
202	5804	999	10/8/1919	CER	SPR	NE	NW	1N 66E 26	0.050	IRR		5.74	17.22	AFA	LI
202	5803	998	10/8/1919	CER	SPR	SE	SW	1N 66E 26	0.001	STK		0	0.26	MGS	LI
205	9857	2342	4/24/1935	CER	STR	NW	SE	5S 66E 15	0.430	IRR		43.34	210	AFS	LI
222	21885	6937	3/20/1964	CER	UG	NW	NE	5S 71E 17	0.010	REC		0	2.35	MGA	LI
222	21884	6936	3/20/1964	CER	UG	NE	SW	5S 71E 21	0.010	REC		0	2.35	MGA	LI
222	V01113		7/6/1912	VST	STR	SE	NW	4S 71E 32	0.250	IRR		15	75	AFS	LI
222	21883	6933	3/20/1964	CER	SPR	NE	NW	5S 71E 17	0.005	REC		0	1.36	MGA	LI

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
222	21882	6932	3/20/1964	CER	SPR	SW	NE	5S 71E 17	0.010	REC		0	2.35	MGA	LI
222	18516	5283	1/11/1960	CER	STR	NE	SE	5S 71E 17	0.000	REC		0	272	AFA	LI
230	26673	9552	4/19/1972	CER	UG	NW	NE	15S 49E 24	0.004	QM		0	0.32	MGA	NY
230	12046	3840	10/14/1947	CER	SPR	SE	SW	12S 46E 04	0.010	IRR		0	10.86	AFA	NY
230	28140	9054	2/25/1974	CER	SPR	NW	SW	12S 46E 05	0.003	QM		0	0.51	MGA	NY
230	26678	8606	4/24/1972	CER	SPR	NE	SE	12S 46E 05	0.060	QM		0	0.11	MGA	NY
143	44250	11268	8/10/1981	CER	UG	SW	NE	2S 40E 32	0.003	STK		0	2.12	MGA	ES
143	29235	9658	2/20/1975	CER	UG	NE	NW	1S 40E 13	0.004	STK		0	1.08	MGA	ES
147	13365	4172	5/3/1950	CER	UG	SW	NW	4S 47E 21	0.010	STK		0	3.67	MGA	NY
147	13625	3956	1/29/1951	CER	SPR	NW	NE	1S 49E 09	0.030	STK		0	7.08	MGA	NY
147	11609	4243	6/12/1946	CER	OSW	SE	SE	5S 50E 09	0.010	STK		0	2.28	MGA	NY
147	10863	3141	9/14/1942	CER	SPR	NW	NE	7S 47E 08	0.005	STK		0	1.18	MGA	NY
148	13288	4170	3/6/1950	CER	SPR	SW	NW	4S 47E 04	0.007	STK		0	1.58	MGA	NY
148	12785	4168	12/31/1948	CER	SPR	SE	NW	2S 46E 34	0.010	STK		0	2.3	MGA	NY
157	11865	3297	5/29/1947	CER	OSW	NW	SW	5S 51E 13	0.030	STK		0	7.08	MGA	NY
157	11669	3266	8/19/1946	CER	LAK	NE	NE	5S 51E 24	0.006	STK		0	1.46	MGA	NY
157	11668	3265	8/19/1946	CER	SPR	SW	NW	5S 52E 26	0.006	STK		0	1.46	MGA	NY
157	11626	3536	7/1/1946	CER	STR	SW	SW	4S 51E 29	0.006	STK		0	1.46	MGA	NY
157	11606	3259	6/12/1946	CER	RES	NE	SE	5S 51E 36	0.006	STK		0	1.48	MGA	NY
157	2357	350	2/28/1912	CER	SPR			5S 52E 14	0.010	STK		0	2.36	MGA	NY
159	3892	691	4/12/1916	CER	SPR	SW	SE	10S 51E 26	0.010	STK		0	3.54	MGA	NY
160	3890	687	4/12/1916	CER	SPR	NW	SW	13S 52E 26	0.006	STK		0	1.42	MGA	NY
180	7397	1175	6/14/1925	CER	UG	SW	SE	6N 63E 31	0.010	STK		0	0.61	MGS	LI
180	6638	2105	2/27/1922	CER	UG	NE	SE	5N 63E 21	0.003	STK		0	0.7	MGA	LI
180	9702	2135	10/9/1933	CER	SPR	SE	NE	6N 63E 19	0.010	STK		0	2.36	MGA	LI
182	V01822		7/10/1923	VST	SPR	NE	SW	6S 65E 17	0.050	STK		0	0.55	MGA	LI
182	V01654		11/29/1919	VST	SPR	SW	SE	4S 63E 36	0.020	STK		0	0.22	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
182	52118	14740	5/18/1988	CER	SPR	NE	NW	6S 65E 17	0.001	STK		0	0.11	MGA	LI
182	52115	14739	5/18/1988	CER	SPR	SW	NE	5S 65E 20	0.002	STK		0	0.37	MGA	LI
182	52114	14738	5/18/1988	CER	SPR	NE	NE	5S 65E 18	0.003	STK		0	0.78	MGA	LI
182	52113	14737	5/18/1988	CER	SPR	SE	SE	5S 65E 06	0.008	STK		0	1.84	MGA	LI
182	52112	13782	5/18/1988	CER	SPR	NW	SW	5S 64E 02	0.008	STK		0	1.89	MGA	LI
182	11378	4047	10/1/1945	CER	SPR	SE	NW	6S 65E 19	0.002	STK		0	0.47	MGA	LI
182	10736	2668	10/2/1941	CER	RES	NW	NE	4S 63E 35	0.005	STK		0	1.3	MGA	LI
182	10629	2596	2/24/1941	CER	SPR	SW	NW	6S 65E 20	0.006	STK		0	1.41	MGA	LI
182	10189	2403	12/3/1937	CER	SPR	NE	SE	5S 64E 03	0.020	STK		0	5.9	MGA	LI
182	5783	1006	9/29/1919	CER	SPR	NW	NE	5S 64E 07	0.010	STK		0	3.54	MGA	LI
182	5782	1005	9/29/1919	CER	SPR	NW	NE	5S 64E 07	0.010	STK		0	2.95	MGA	LI
182	5301	736	10/25/1918	CER	RES	SE	NE	5S 64E 16	0.010	STK		0	3.26	MGA	LI
182	4693	730	11/12/1917	CER	SPR	SW	SW	5S 65E 32	0.010	STK		0	2.6	MGA	LI

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
182	4621	728	10/8/1917	CER	SPR			5S 64E 02	0.003	STK		0	0.71	MGA	LI
198	65386	16306	8/6/1999	CER	UG	SE	SW	1S 70E 16	0.003	STK		0	0.73	MGA	LI
202	63228	15429	7/7/1997	CER	UG	SE	SW	3N 67E 20	0.010	STK		0	2.02	MGA	LI
202	41412	10836	5/21/1980	CER	UG	NE	SW	2N 67E 16	0.001	STK		0	0.08	MGA	LI
202	35850	10214	9/6/1978	CER	UG	NE	SE	3N 66E 08	0.006	STK		0	1.36	MGA	WP
202	35349	10202	4/26/1978	CER	UG	NE	SE	3N 66E 23	0.005	STK		0	1.06	MGA	LI
202	35347	10201	4/26/1978	CER	UG	NW	SW	3N 66E 15	0.005	STK		0	1.06	MGA	LI
202	V02069		3/3/1927	VST	SPR	SW	NE	2N 68E 24	0.007	STK		0	1.46	MGA	LI
202	35953	10219	10/3/1978	CER	SPR	NE	NE	4N 65E 23	0.004	STK		0	1.05	MGA	LI
205	58026	14244	8/31/1992	CER	UG	NW	NE	7S 67E 20	0.006	STK		0	1.46	MGA	LI
205	52417	12841	8/12/1988	CER	SPR	SW	SE	5S 65E 23	0.001	STK		0	0.26	MGA	LI
205	11040	3020	12/20/1943	CER	SPR	SE	SE	6S 66E 18	0.003	STK		0	0.83	MGA	LI
205	10899	2689	12/15/1942	CER	OSW	NE	NW	5S 65E 14	0.009	STK		0	2.12	MGA	LI
205	10897	2770	12/3/1942	CER	SPR	NE	SW	6S 66E 18	0.010	STK		0	3.65	MGA	LI
205	10862	2680	9/14/1942	CER	SPR	NE	NW	5S 65E 11	0.003	STK		0	0.73	MGA	LI
205	10656	2612	4/30/1941	CER	SPR	SE	NW	4S 65E 34	0.008	STK		0	1.89	MGA	LI
205	10062	3404	12/9/1936	CER	SPR	SW	NW	6S 67E 33	0.003	STK		0	0.71	MGA	LI
205	8553	2062	6/3/1928	CER	STR	NW	SW	7S 68E 20	0.010	STK		0	3.65	MGA	LI
209	59308	15091	10/11/1993	CER	UG	NW	NE	5S 60E 10	0.010	STK		0	2.56	MGA	LI
209	V01567		4/16/1918	VST	SPR	SW	SE	4S 59E 07	0.020	STK		0	0.71	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
209	3853	2331	4/1/1916	CER	SPR	NE	SE	4S 58E 36	0.001	STK		0	0.21	MGA	LI
222	9009	2046	8/12/1929	CER	STR	NW	SW	5S 71E 28	0.006	STK		0	1.42	MGA	LI
230	3386	3034	5/8/1915	CER	SPR	SE	NW	12S 44E 25	0.005	STK		0	1.11	MGA	NY
230	4372	3033	3/24/1917	CER	SPR	SE	SW	12S 44E 11	0.002	STK		0	0.35	MGA	NY
231	44718	12287	10/29/1981	CER	UG	SE	SW	10S 42E 02	0.006	STK		0	1.46	MGA	ES
231	29673	8848	9/25/1975	CER	UG	NW	SW	8S 43E 32	0.010	STK		0	2.59	MGA	ES
232	28971	8738	11/26/1974	CER	UG	NE	SW	8S 41E 12	0.002	STK		0	1.46	MGA	ES
232	28832	8737	10/29/1974	CER	UG	SW	NE	8S 41E 11	0.002	STK		0	0		ES
232	14305	4383	5/23/1952	CER	SPR	SE	NW	8S 41E 11	0.001	STK		0	0.31	MGA	ES
137A	8007	1900	2/17/1927	CER	UG	SW	SW	4N 42E 12	0.010	STK		0	13.74	AFA	NY
137A	40075	11407	12/20/1979	CER	UG	NW	NW	3N 41E 28	0.006	STK		0	1.46	MGA	ES
137A	13191	4266	12/15/1949	CER	UG	NW	NW	3N 41E 28	0.007	STK		0	0.8	MGS	ES
137A	9864	2520	6/3/1935	CER	SPR	SW	NW	2N 40E 14	0.004	STK		0	0.8	MGA	ES
137A	8008	1901	2/17/1927	CER	SPR	SE	NE	4N 42E 35	0.020	STK		0	14.52	AFA	NY
155C	11938	3855	7/24/1947	CER	SPR	NW	NE	7N 52E 33	0.001	STK		0	1.09	MGA	NY
155C	11933	3850	7/24/1947	CER	OSW	NE	NW	7N 53E 26	0.001	STK		0	1.46	MGA	NY
158A	3889	688	4/12/1916	CER	SPR	SW	SE	5S 54E 05	3.000	STK		0	0.1	MGA	NY
158A	3887	690	4/12/1916	CER	SPR	SE	SW	5S 53E 31	0.003	STK		0	0.1	MGA	LI
169A	V01377		4/24/1915	VST	SPR	NE	NE	5S 55E 02	0.100	STK		0	0.43	MGA	LI
169A	5552	2332	6/21/1919	CER	SPR	SW	SW	4S 58E 12	0.003	STK		0	3.72	MGA	LI
143	29176	12155	1/30/1975	CER	UG	SE	SE	3S 41E 03	0.030	STK		0	7.76	MGA	ES
143	V01436		12/23/1915	VST	SPR	SW	NE	5S 40E 09	0.000	STK		0	0		ES
143	V05322		7/24/1991	VST	SPR	SE	SW	5S 40E 05	0.010	STK		0	0		ES
143	V04816		4/12/1989	VST	SPR	SW	NE	5S 40E 09	0.040	STK		0	0		ES

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
147	12143	3253	12/27/1947	CER	UG	SE	SW	3S 51E 11	0.030	STK		0	7.41	MGA	NY
148	V02376		1/29/1951	VST	SPR	NW	NE	1S 49E 09	0.020	STK		0	0		NY
148	V02370		8/25/1950	VST	RES	NW	NE	3S 48E 19	0.020	STK		0	0		NY
148	V02369		8/25/1950	VST	RES	SE	NE	3S 47E 02	0.020	STK		0	0		NY
180	V01965		1/11/1926	VST	SPR	NE	SW	6N 63E 30	0.002	STK		0	0	*	LI
180	V01964		1/11/1926	VST	SPR	SE	NE	6N 63E 19	0.004	STK		0	0	*	LI
182	V01449		3/13/1916	VST	SPR	SW	SW	3S 62E 25	0.100	STK		0	0	*	LI
182	V01419		9/2/1915	VST	SPR	SW	NW	5S 65E 20	0.020	STK		0	0		LI
182	V01400		7/12/1915	VST	SPR	NE	SE	5S 64E 03	0.020	STK		0	0		LI
182	V01399		7/3/1915	VST	SPR	SE	SE	5S 65E 06	0.020	STK		0	0		LI
182	V01598		10/25/1918	VST	SPR	SE	SW	6S 64E 01	0.020	STK		0	0		LI
182	3879	1090	4/10/1916	CER	SPR	SE	SE	3S 63E 30	0.009	STK		0	0		LI
182	4695	731	11/12/1917	CER	SPR	SW	SW	5S 65E 32	0.010	STK		0	0		LI
198	65563		9/24/1999	PER	UG	NW	NE	1S 69E 29	0.003	STK		0	0.73	MGA	LI
198	65388	16268	8/6/1999	CER	UG	NW	NE	1S 69E 29	0.003	STK		0	0.73	MGA	LI
198	9269	2258	6/5/1930	CER	STR	SW	SE	1S 69E 06	0.020	STK		0	5.11	MGA	LI
198	650	534X	8/28/1907	CER	SPR		SE	1S 68E 13	0.020	OTH		0	5.9	MGA	LI
198	V04579		1/26/1987	VST	SPR	SW	NE	1S 70E 21	0.040	STK		0	0		LI
198	V04306		5/3/1985	VST	SPR	NW	SE	1N 71E 18	0.000	STK		0	0		LI
200	V04391		5/21/1985	VST	SPR	SW	SW	2N 69E 15	0.020	STK		0	0		LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
205	52416	12840	8/12/1988	CER	SPR	SW	NE	5S 66E 18	0.002	STK		0	0.51	MGA	LI
205	52415	12839	8/12/1988	CER	SPR	NE	SW	5S 66E 09	0.001	STK		0	0.25	MGA	LI
205	52414	12838	8/12/1988	CER	SPR	NE	SW	5S 66E 03	0.003	STK		0	0.77	MGA	LI
205	10924	2714	2/15/1943	CER	SPR	SE	SE	5S 66E 17	0.002	STK		0	0.58	MGA	LI
205	10923	2713	2/15/1943	CER	SPR	SE	SE	5S 66E 07	0.001	STK		0	0.37	MGA	LI
205	10922	2712	2/15/1943	CER	SPR	NE	SW	5S 66E 21	0.006	STK		0	1.46	MGA	LI
205	10655	2611	4/30/1941	CER	SPR	NW	NE	4S 66E 19	0.007	STK		0	1.65	MGA	LI
205	V01503		4/21/1917	VST	SPR	NW	NW	6S 68E 32	0.100	STK		0	0		LI
205	V01448		2/7/1916	VST	SPR	SW	SW	6S 67E 01	0.100	STK		0	0		LI
205	V04350		5/13/1985	VST	SPR	NE	SW	6S 68E 14	0.020	STK		0	0		LI
205	V04349		5/13/1985	VST	SPR	NW	NW	6S 68E 25	0.020	STK		0	0		LI
205	V04347		5/13/1985	VST	SPR	SW	SW	7S 68E 01	0.020	STK		0	0		LI
205	V02320		9/14/1942	VST	STR	SE	NE	5S 65E 03	0.250	STK		0	0		LI
205	V01632		7/15/1919	VST	SPR	NW	NE	6S 65E 12	0.100	STK		0	0		LI
205	V01628		6/23/1919	VST	SPR	SW	SW	6S 66E 36	0.050	STK		0	0		LI
206	5643	1528	7/29/1919	CER	SPR	SW	SE	7S 66E 16	0.010	STK		0	0		LI
209	6114	777	5/12/1920	CER	SPR	NW	SW	3S 59E 21	0.003	STK		0	0.71	MGA	LI
209	4719	1579	11/19/1917	CER	SPR	SW	SE	3S 59E 11	0.001	STK		0	0.24	MGA	LI
209	4718	1578	11/19/1917	CER	SPR	SE	NE	3S 59E 24	0.002	STK		0	0.36	MGA	LI
222	52358	13334	8/1/1988	CER	OSW	SW	NE	4S 71E 20	0.007	STK		0	1.65	MGA	LI
230	70417		9/18/2003	PER	UG		LT1	16S 48E 35	0.050	COM		0	10	AFA	NY
230	70232		7/17/2003	PER	UG		LT7	16S 49E 35	0.008	COM		0	2	AFA	NY
230	70231		7/17/2003	PER	UG	NE	SW	16S 48E 07	0.100	COM		0	25.5	AFA	NY
230	70035		5/19/2003	PER	UG	SW	SE	16S 49E 09	0.200	COM		0	15	AFA	NY
230	69834		4/9/2003	PER	UG	NE	NW	16S 48E 15	0.008	COM		0	2	AFA	NY
230	69729		3/13/2003	PER	UG	NW	NW	16S 49E 27	0.170	COM		0	16	AFA	NY
230	69728		3/13/2003	PER	UG	SE	SW	16S 49E 28	0.670	COM		0	60	AFA	NY
230	68342		1/4/2002	PER	UG	SE	SW	16S 49E 09	0.080	COM		0	2	AFA	NY

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	68086		10/12/2001	PER	UG	SE	NW	16S 48E 15	0.060	COM		0	15	AFA	NY
230	66042	16276	2/3/2000	CER	UG	NW	NE	17S 49E 10	0.170	COM	Y	0	59.83	AFA	NY
230	66041		2/3/2000	PER	UG	NE	NE	17S 49E 09	1.000	COM	Y	0	59.83	AFA	NY
230	65237		6/24/1999	PER	UG		LT02	16S 48E 07	0.050	COM		0	2	AFA	NY
230	65145	16275	5/27/1999	CER	UG	NW	NE	17S 49E 10	0.130	COM	Y	0	100	AFA	NY
230	64767	16274	1/13/1999	CER	UG	NW	NE	17S 49E 10	0.140	COM	Y	0	57.5	AFA	NY
230	64766		1/13/1999	PER	UG	NE	NE	17S 49E 09	1.000	COM	Y	0	57.5	AFA	NY
230	63715	15815	1/6/1998	CER	UG	NE	NW	16S 48E 15	0.020	COM		0	5.08	AFA	NY
230	61080	15366	3/28/1995	CER	UG	NW	NE	17S 49E 10	0.100	COM	Y	0	50	AFA	NY
230	59729		1/28/1994	PER	UG	NE	NE	17S 49E 09	0.100	COM		0	50	AFA	NY
230	59180	15424	8/26/1993	CER	UG		SE	16S 49E 35	0.007	COM		0	0.53	MGA	NY
230	51915		3/11/1988	PER	UG	SE	SE	16S 49E 26	1.000	COM		0	3.16	MGA	NY
230	46218	12399	10/13/1982	CER	UG	NE	NE	16S 49E 14	0.010	COM		0	0.03	MGA	NY
230	3385A02	7430	5/8/1915	CER	SPR	NW	SW	12S 46E 05	0.007	STK		0	1.58	MGA	NY
230	6050	1231	4/9/1920	CER	SPR	NE	NE	12S 46E 11	0.001	STK		0	0.18	MGA	NY
232	29848	8851	12/8/1975	CER	SPR	SE	SE	8S 41E 13	0.010	STK		0	0		ES
232	25329	8736	10/24/1969	CER	SPR	NE	SE	8S 41E 11	0.020	STK		0	0		ES
232	25328	8735	10/24/1969	CER	SPR	NE	SW	8S 41E 12	0.020	STK		0	0		ES
137A	V01383		4/28/1915	VST	SPR	NE	NW	2N 40E 15	0.500	STK		0	0		ES
137A	V05504		11/18/1991	VST	SPR	SE	NE	2N 40E 04	0.100	STK		0	0		ES
137A	V05502		11/18/1991	VST	SPR	SW	SW	2N 40E 20	0.100	STK		0	0		ES
137A	V05501		11/18/1991	VST	SPR	NW	NW	2N 40E 10	0.100	STK		0	0		ES
137A	V05499		11/18/1991	VST	SPR	NE	NE	2N 40E 15	0.100	STK		0	0		ES
137A	7267	1152	12/8/1924	CER	SPR	SE	NE	3N 42E 14	0.010	COM		0	2.59	MGA	NY
158A	3746	334	12/20/1915	CER	SPR	SE	SE	6N 52E 12	0.020	STK		0	0		NY
169A	6069	804	4/26/1920	CER	SPR	NE	SE	3S 58E 31	0.002	STK		0	0.35	MGA	LI

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Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
169A	6067	774	4/26/1920	CER	SPR	NE	NE	3S 58E 16	0.004	STK		0	1.06	MGA	LI
169A	6066	803	4/26/1920	CER	SPR	SE	SE	3S 58E 17	0.001	STK		0	0.35	MGA	LI
169A	V01505		5/17/1917	VST	SPR	NE	NE	4S 58E 03	0.050	STK		0	0		LI
169A	V01382		4/24/1915	VST	SPR	NW	SE	5S 55E 12	0.050	STK		0	0		LI
169A	V01381		4/24/1915	VST	SPR	SE	NW	5S 55E 12	0.050	STK		0	0		LI
169A	V01380		4/27/1915	VST	SPR	NW	NE	5S 55E 12	0.050	STK		0	0		LI
169A	V01374		4/24/1915	VST	SPR	SE	SW	5S 55E 01	0.050	STK		0	0		LI
169A	V01607		3/5/1919	VST	SPR	SE	NW	4S 58E 13	0.020	STK		0	0		LI
169A	V01566		4/16/1918	VST	SPR	SW	NE	4S 58E 13	0.020	STK		0	0		LI
142	9681	2519	7/20/1933	CER	UG	SW	SW	1S 42E 02	0.003	STK		0	0.73	MGA	ES
143	44269	12781	8/10/1981	CER	UG	SW	NE	1S 40E 29	0.260	MM	Y	0	61.33	MGA	ES
143	44260	12777	8/10/1981	CER	UG	SW	NE	2S 40E 17	0.200	MM	Y	0	47.17	MGA	ES
143	44258	12776	8/10/1981	CER	UG	SW	NE	2S 40E 08	0.270	MM	Y	0	63.69	MGA	ES
143	44257	12775	8/10/1981	CER	UG	SW	NE	2S 40E 07	0.350	MM	Y	0	82.56	MGA	ES
143	44256	12774	8/10/1981	CER	UG	SW	NE	2S 40E 04	0.220	MM	Y	0	51.89	MGA	ES
143	44255	12773	8/10/1981	CER	UG	SW	NE	2S 40E 03	0.390	MM	Y	0	92	MGA	ES
147	V02374		8/25/1950	VST	SPR	SE	SE	2S 50E 24	0.030	STK		0	0		NY
147	V02373		8/25/1950	VST	SPR	SE	SE	2S 50E 04	0.010	STK		0	0		NY
148	V02368		8/25/1950	VST	RES	NW	NW	1S 47E 22	0.020	STK		0	0		NY
148	V02378		1/29/1951	VST	SPR	SE	NW	1N 49E 28	0.020	STK		0	0		NY
148	V02377		1/29/1951	VST	SPR	SW	SW	1N 49E 23	0.050	STK		0	0		NY
148	V02375		1/29/1951	VST	SPR	NW	NE	1S 50E 08	0.020	STK		0	0		NY
148	V02367		8/25/1950	VST	SPR	SW	NW	1N 49E 32	0.010	STK		0	0		NY
148	V01689		4/9/1920	VST	SPR	SW	NW	1N 49E 32	0.020	STK		0	0		NY
148	1580	377	1/20/1910	CER	SPR	SE	NW	2S 46E 34	0.010	IRR		0.25	7.24	AFA	NY
182	9713	2423	11/25/1933	CER	SPR	NE	SW	6S 65E 17	0.050	MM		0	25	AFS	LI
182	4894		2/7/1918	PER	SPR	SE	SE	5S 64E 16	0.020	DOM		0	0		LI
198	43771	15185	5/20/1981	CER	UG	SW	NW	1N 69E 32	4.000	IRR	Y	245.7	1228.5	AFS	LI
198	43770	15184	5/20/1981	CER	UG	NE	SW	1N 69E 32	4.000	IRR	Y	248	1240	AFS	LI

Hydrographic Basin Abstracts - Non-CRC Basins

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Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
198	39271	13501	10/2/1979	CER	UG	NW	NW	1N 69E 32	2.500	IRR		83	415	AFS	LI
198	24218	8727	11/13/1967	CER	UG	NE	SW	1N 69E 31	2.000	IRR	Y	50	200	AFS	LI
198	24217	8726	11/13/1967	CER	UG	SE	SW	1N 69E 31	1.700	IRR	Y	50	200	AFS	LI
198	18352	6252	9/23/1959	CER	UG	NE	SW	1N 69E 31	2.000	IRR		112.8	451.2	AFS	LI
198	V01795		4/27/1922	DEC	STR	SE	SE	1N 69E 34	0.900	DEC		36.3	181.5	AFA	LI
198	22260	7596	9/24/1964	CER	SPR	SE	SE	1N 69E 34	0.500	IRD		16.8	67.2	AFA	LI
199	24199	7042	11/2/1967	CER	UG	NW	SE	1N 69E 21	1.250	IRR		50	250	AFA	LI
199	20861	7145	11/26/1962	CER	UG	NW	NE	1N 69E 21	2.200	IRR		118.2	591	AFA	LI
199	11060	3150	1/29/1944	CER	UG	NE	NE	1N 69E 21	0.890	IRR		88.5	293	AFA	LI
200	68688		4/8/2002	PER	UG	SE	SE	1N 69E 10	0.550	IRR		0	140	AFA	LI
200	28692	10502	9/16/1974	CER	UG	SW	NE	2N 69E 35	0.100	QM		0	0.4	MGA	LI
200	28691	10501	9/16/1974	CER	UG	SW	NE	2N 69E 35	0.100	QM		0	0.75	MGA	LI
200	13071	3968	10/3/1949	CER	UG	SE	NE	1N 69E 10	2.000	IRR		29	116	AFA	LI
201	63031	15858	4/14/1997	CER	UG	NE	NW	2N 69E 24	0.100	QM	Y	0	1.99	MGA	LI
201	50718	13379	3/20/1987	CER	UG	NE	NW	2N 69E 24	0.030	QM	Y	0	0.8	MGA	LI
201	V01352		3/1/1915	DEC	SPR	NW	SW	5S 69E 13	3.790	DEC		151.8	759	AFA	LI
201	V04192		9/28/1984	VST	SPR	SE	NW	2N 70E 18	0.000	IRR		0	0		LI
202	65881		1/19/2000	PER	UG	SE	NW	2N 67E 22	1.350	IRR	Y	68.64	0		LI
202	50114	14553	8/25/1986	CER	UG	SE	NE	1N 67E 14	0.220	QM		0	0.97	MGA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
202	43265	12068	2/27/1981	CER	UG	SE	NE	1N 67E 14	0.110	QM		0	0.49	MGA	LI
202	28248	8547	4/9/1974	CER	UG	SE	NE	1N 67E 15	2.000	MM		0	1.87	MGA	LI
202	26328	9402	9/22/1971	CER	UG	NE	NE	2N 67E 27	0.100	IRR		5	20	AFA	LI
205	58908E		6/7/1993	PER	UG	NW	SW	4S 67E 08	0.050	ENV		0	13.14	MGA	LI
205	61081		3/28/1995	PER	UG	SW	NW	5S 66E 02	0.100	COM		0	3	AFA	LI
205	V04365		5/20/1985	DEC	UG	NE	SW	7S 67E 07	0.020	DEC		0	0	MGA	LI
205	V01229		2/20/1913	DEC	UG			7S 67E 07	0.250	DEC		0	0		LI
205	47799	13580	3/14/1984	CER	UG	NW	NE	6S 67E 22	0.100	MM		0	2.08	MGA	LI
205	V01076		12/16/1911	DEC	OSW	NW	SE	4S 66E 25	1.640	DEC		65.8	329	AFS	LI
205	55879		2/25/1991	PER	SPR	SE	SE	4S 66E 01	0.002	QM		0	1.59	AFA	LI
205	55877		2/25/1991	PER	SPR	NE	NE	4S 66E 12	0.006	QM		0	4.85	AFA	LI
205	55876		2/25/1991	PER	SPR	NE	NE	4S 66E 12	0.004	QM		0	3.19	AFA	LI
205	41000	14904	4/1/1980	CER	SPR	NE	NE	4S 67E 19	0.007	REC		0	1.58	MGA	LI
205	40999	14903	4/1/1980	CER	SPR	NE	NE	4S 67E 19	0.010	REC		0	2.62	MGA	LI
205	40998	14226	4/1/1980	CER	SPR	NE	NE	4S 67E 19	0.003	REC		0	0.79	MGA	LI
205	10625	4433	2/19/1941	CER	SPR	NE	SW	4S 67E 08	0.480	IRR		47.66	240	AFS	LI
205	9935	2483	2/1/1936	CER	STR	NW	NE	4S 66E 25	0.160	IRR		16.7	71	AFS	LI
205	2873	237	1/10/1914	CER	STR	NE	NW	4S 67E 08	0.140	IRR		14	0	*	LI
205	V02321		9/14/1942	VST	SPR	NE	SW	5S 65E 12	0.020	STK		0	0		LI
205	V00804		10/31/1910	VST	SPR	NW	SE	4S 66E 32	0.000	STK		0	0		LI
205	V04345		5/9/1985	DEC	SPR	NE	SW	7S 66E 12	3.970	DEC		158.7	793.5	AFA	LI
205	V02274		10/26/1933	DEC	STR	SE	NE	7S 66E 12	3.970	DEC		158.7	0	AFA	LI
205	V01557		3/9/1918	DEC	STR	SW	SW	7S 67E 26	1.700	DEC		68	340	AFA	LI

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
205	9988	2401	5/11/1936	CER	STR	NE	NE	6S 65E 13	0.040	MM		0	0	*	LI
205	6396	786	2/5/1921	CER	SPR	SE	NE	6S 67E 27	0.020	MM		0	0	*	LI
209	68334		12/28/2001	PER	UG	NE	NE	4S 60E 34	0.250	IRR	Y	0	100	AFA	LI
209	62864		2/19/1997	PER	UG	NE	NE	4S 60E 34	0.200	IRR	Y	20	100	AFA	LI
209	52120	14481	5/20/1988	CER	UG	NE	SW	5S 60E 10	0.200	IRR	Y	112.38	120.2	AFS	LI
209	35739	12877	8/14/1978	CER	UG	NW	NW	4S 60E 23	0.100	IRR		29	66.83	AFA	LI
209	35256	12847	4/7/1978	CER	UG	NE	SW	5S 60E 10	1.110	IRR	Y	160	800	AFA	LI
209	35055	10691	3/3/1978	CER	UG	NW	NW	4S 60E 14	0.840	IRR	Y	24	120	AFA	LI
209	28642	9636	9/3/1974	CER	UG	NE	SW	5S 60E 10	1.340	IRR	Y	120	600	AFA	LI
209	25913	7915	1/15/1971	CER	UG	NW	SW	4S 60E 23	0.740	IRR	Y	116.6	270	AFS	LI
209	25906	8904	1/13/1971	CER	UG	NW	SW	4S 60E 23	1.110	IRR	Y	107	405	AFS	LI
209	19475	6094	1/23/1961	CER	UG	NE	NE	4S 60E 34	0.800	IRR		14.7	73.5	AFA	LI
209	13442	5313	7/7/1950	CER	UG	NE	NE	4S 60E 02	1.000	IRR	Y	14.5	72.5	AFS	LI
209	13441	5312	7/7/1950	CER	UG	NW	SE	4S 60E 02	2.000	IRR	Y	77.15	385.75	AFS	LI
230	67393		3/30/2001	PER	UG	SW	SE	13S 47E 26	0.220	COM		0	20	AFA	NY
230	63480		10/6/1997	PER	UG	SW	SE	13S 47E 26	0.010	COM		0	4.3	MGA	NY
230	62309		7/17/1996	PER	UG	SW	SW	15S 50E 18	0.030	COM		0	5	AFA	NY
230	60705		12/14/1994	PER	UG	SE	SW	15S 50E 18	0.010	COM		0	4.46	MGA	NY
230	59400		11/29/1993	PER	UG	SE	SW	15S 50E 18	0.020	COM		0	4	AFA	NY
230	47528		12/21/1983	PER	UG	SE	SE	15S 49E 13	0.500	COM		0	3.53	MGA	NY
230	13574	4276	12/19/1950	CER	UG	SW	NE	12S 46E 09	0.010	DOM		0	1.05	MGA	NY
230	17657A02	7011	9/9/1958	CER	UG	NE	NW	16S 48E 15	0.040	IRR		5	10	AFS	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	17657A01	6978	9/9/1958	CER	UG	NE	NW	16S 48E 15	0.520	IRR		150	135.8	AFS	NY
230	70718		1/5/2004	PER	UG	SE	NW	16S 49E 35	0.430	IRR	Y	0	65.7	AFA	NY
230	70717		1/5/2004	PER	UG	SE	NW	16S 49E 35	0.150	IRR	Y	0	40	AFA	NY
230	70716		1/5/2004	PER	UG	SE	NW	16S 49E 35	0.030	IRR	Y	0	10	AFA	NY
230	70715		1/5/2004	PER	UG	SE	NW	16S 49E 35	0.030	IRR	Y	0	10	AFA	NY
230	70679		12/8/2003	PER	UG	SW	SE	16S 49E 09	0.200	QM		0	15	AFA	NY
230	70487		10/1/2003	PER	UG	NW	NE	16S 49E 08	0.060	QM		0	1.68	AFA	NY
230	70416		9/18/2003	PER	UG		LT1	16S 49E 32	0.050	IRR		0	10	AFA	NY
230	70349		8/25/2003	PER	UG	NW	SW	17S 49E 09	0.110	QM		0	5	AFA	NY
230	70188		7/2/2003	PER	UG	SE	SW	16S 48E 18	0.080	QM		0	1.12	AFA	NY
230	70150		6/25/2003	PER	UG	NW	NE	17S 49E 07	0.110	QM		0	4.48	AFA	NY
230	70047		5/22/2003	PER	UG	NW	NW	17S 49E 07	0.090	QM		0	1.68	AFA	NY
230	69835		4/9/2003	PER	UG	NE	NW	16S 48E 15	0.004	QM		0	1	AFA	NY
230	69693		2/27/2003	PER	UG		LT3	17S 48E 12	0.040	QM		0	2.24	AFA	NY
230	69692		2/27/2003	PER	UG	SW	LT3	17S 48E 12	0.040	QM		0	2.24	AFA	NY
230	69661		2/25/2003	PER	UG	NE	SW	16S 49E 22	0.040	QM		0	2.24	AFA	NY
230	69660		2/25/2003	PER	UG	NE	SW	16S 49E 22	0.040	QM		0	2.24	AFA	NY
230	69659		2/25/2003	PER	UG	NE	SW	16S 49E 22	0.040	QM		0	2.24	AFA	NY
230	69540		2/5/2003	PER	UG	SW	NW	16S 48E 15	0.160	IRR		0	33.68	AFA	NY
230	68993		7/29/2002	PER	UG	NE	NW	17S 49E 02	0.070	IRR		0	20	AFA	NY
230	68451		2/6/2002	PER	UG	SW	NW	16S 48E 23	0.190	IRR	Y	0	50	AFA	NY
230	68242		11/29/2001	PER	UG	NW	NW	16S 49E 27	0.230	IRR	Y	0	36.4	AFA	NY
230	68218		11/21/2001	PER	UG	NE	SE	17S 49E 09	1.280	IRR	Y	0	0	AFA	NY
230	68217		11/21/2001	PER	UG	NW	SW	17S 49E 09	0.990	IRR	Y	0	95	AFA	NY
230	68184		11/9/2001	PER	UG	SW	NW	16S 48E 07	0.030	IRR		0	9.95	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	68087		10/12/2001	PER	UG	SE	NE	16S 48E 16	0.090	IRR		0	22.4	AFA	NY
230	67957		8/30/2001	PER	UG	NE	NE	17S 49E 09	0.120	IRR	Y	0	75	AFA	NY
230	67956		8/30/2001	PER	UG	NE	NE	17S 49E 09	0.240	IRR	Y	0	17.5	AFA	NY
230	67955		8/29/2001	PER	UG	SW	NW	16S 48E 23	0.160	IRR	Y	0	44.8	AFA	NY
230	67843		7/26/2001	PER	UG	NW	NW	16S 49E 27	0.070	IRR	Y	0	18	AFA	NY
230	67643		6/6/2001	PER	UG	NE	NE	16S 48E 36	0.230	IRR		0	45	AFA	NY
230	66789		8/25/2000	PER	UG	NW	NW	17S 49E 15	0.070	IRR	Y	113.8	25	AFA	NY
230	66788		8/25/2000	PER	UG	NW	NW	17S 49E 15	0.330	IRR	Y	113.8	111	AFA	NY
230	66787		8/25/2000	PER	UG	NW	NW	17S 49E 15	0.130	IRR	Y	113.8	42.98	AFA	NY
230	66445		6/9/2000	PER	UG	SE	NE	16S 48E 16	0.140	IRR		19.95	34.85	AFA	NY
230	66324		5/3/2000	PER	UG	SW	NW	16S 48E 23	0.660	IRR	Y	20	100	AFA	NY
230	66323		5/3/2000	PER	UG	SW	NW	16S 48E 23	0.750	IRR	Y	20	100	AFA	NY
230	66281		4/10/2000	PER	UG	NE	SE	16S 49E 22	0.070	IRR		3.98	19.8	AFA	NY
230	66276		4/10/2000	PER	UG	SW	SE	16S 49E 22	0.080	IRR		4.77	23.85	AFA	NY
230	66274		4/10/2000	PER	UG	SE	SE	16S 49E 22	0.030	IRR		1.99	0	AFA	NY
230	66150		3/15/2000	PER	UG	SE	SW	16S 48E 18	0.030	IRR		0	11.7	AFA	NY
230	66083		2/16/2000	PER	UG	NW	NE	16S 49E 36	0.030	IRR		5	10	AFA	NY
230	66065		2/11/2000	PER	UG	NW	NW	16S 48E 15	0.010	QM		0	2.8	AFA	NY
230	66057		2/8/2000	PER	UG	NW	NW	16S 48E 20	0.600	IRR		39.9	200	AFA	NY
230	65746		12/23/1999	PER	UG	SW	NW	16S 48E 23	0.190	IRR	Y	0	50	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	65637		10/26/1999	PER	UG	NW	SW	17S 49E 15	0.020	IRR		87.5	6	AFA	NY
230	65636		10/26/1999	PER	UG	NW	SW	17S 49E 15	0.020	IRR	Y	87.5	5.08	AFA	NY
230	65635		10/26/1999	PER	UG	NW	SW	17S 49E 15	0.020	IRR	Y	87.5	5.08	AFA	NY
230	65474		8/30/1999	PER	UG		SE	17S 48E 12	0.040	IRR		0	10	AFA	NY
230	65473		8/30/1999	PER	UG		SE	17S 48E 12	0.060	IRR		0	24	AFA	NY
230	65401		8/10/1999	PER	UG	NW	SW	17S 49E 15	0.900	IRR	Y	87.5	300	AFA	NY
230	65327		7/20/1999	PER	UG	NW	NW	17S 49E 15	0.150	IRR	Y	0	50	AFA	NY
230	65236		6/24/1999	PER	UG		LT08	16S 48E 35	0.030	IRR	Y	0	10	AFA	NY
230	65235		6/24/1999	PER	UG		LT08	16S 48E 35	0.030	IRR	Y	0	10	AFA	NY
230	64997	15733	4/1/1999	CER	UG	SE	SW	16S 49E 09	0.150	IRR		9.99	39.96	AFA	NY
230	64856		2/17/1999	PER	UG	SE	SE	16S 47E 12	0.080	MM		0	6	AFA	NY
230	64737		1/5/1999	PER	UG	NE	SE	17S 48E 01	0.550	IRR	Y	117.18	185.9	AFA	NY
230	64736		1/5/1999	PER	UG	NW	SE	17S 48E 01	1.350	IRR	Y	117.18	400	AFA	NY
230	64552		10/27/1998	PER	UG	NE	NE	16S 48E 15	0.008	IRR		0	2	AFA	NY
230	64491		9/29/1998	PER	UG	NE	SW	17S 49E 09	3.120	IRR	Y	210	250	AFA	NY
230	64490		9/29/1998	PER	UG	NE	NW	17S 49E 09	1.110	IRR	Y	210	200	AFA	NY
230	64489		9/29/1998	PER	UG	NE	SE	17S 49E 09	2.450	IRR	Y	210	790	AFA	NY
230	64457	16054	9/17/1998	CER	UG	NE	NW	17S 48E 12	1.080	IRR	Y	125.6	524.83	AFA	NY
230	64456	16053	9/17/1998	CER	UG	NE	NW	17S 48E 12	0.280	MM		0	68.8	AFA	NY
230	63566		11/14/1997	PER	UG		LT03	17S 48E 12	0.030	IRR		0	10	AFA	NY
230	63565		11/14/1997	PER	UG		LT01	17S 48E 12	0.090	IRR		0	24.68	AFA	NY
230	63235		7/8/1997	PER	UG	SE	NE	16S 49E 08	0.110	IRR		4.55	18.2	AFA	NY
230	63234		7/8/1997	PER	UG	SE	NE	16S 49E 08	0.110	IRR		4.7	18.2	AFA	NY
230	63174	15764	6/11/1997	CER	UG	NE	SW	16S 48E 23	0.950	IRR	Y	111.96	94.5	AFA	NY
230	63153	15763	5/29/1997	CER	UG	NE	SW	16S 48E 23	0.060	IRR	Y	111.96	23.9	AFA	NY

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	63152	15762	5/29/1997	CER	UG	NE	SW	16S 48E 23	0.060	IRR	Y	111.96	24	AFA	NY
230	63151	15761	5/29/1997	CER	UG	NE	SW	16S 48E 23	0.200	IRR	Y	111.96	71.84	AFA	NY
230	63143	15842	5/27/1997	CER	UG	SE	NE	16S 49E 08	0.100	QM		0	3.95	AFA	NY
230	63082		5/5/1997	PER	UG	NE	NW	16S 49E 33	1.250	IRR		39.4	157.6	AFA	NY
230	62919	15760	3/13/1997	CER	UG	NE	SW	16S 48E 23	0.520	IRR	Y	111.96	148.55	AFA	NY
230	62918	15759	3/13/1997	CER	UG	NE	SW	16S 48E 23	0.860	IRR	Y	111.96	197	AFA	NY
230	62465	16051	9/19/1996	CER	UG	SW	NW	16S 48E 07	0.020	IRR		0	6.43	AFA	NY
230	62373		8/8/1996	PER	UG	SE	SE	16S 49E 22	0.040	IRR		2.27	11.35	AFA	NY
230	62322		7/24/1996	PER	UG	NW	SE	16S 49E 05	0.040	IRR		10	7	AFA	NY
230	61205	15738	5/5/1995	CER	UG		SE	16S 49E 32	0.320	IRR		17.9	89.5	AFA	NY
230	60472	15364	9/14/1994	CER	UG	SE	NW	16S 48E 15	0.030	IRR		2.5	8	AFA	NY
230	60471	15031	9/14/1994	CER	UG	NW	NW	16S 48E 15	0.010	IRR		1	4	AFA	NY
230	60468		9/14/1994	PER	UG	SW	NW	16S 48E 15	0.030	IRR		2.26	9.08	AFA	NY
230	60466	15302	9/14/1994	CER	UG	SE	NW	16S 48E 15	0.030	IRR		1.5	4.3	AFA	NY
230	60463	15632	9/14/1994	CER	UG	NW	NW	16S 48E 15	0.030	IRR		2.5	10	AFA	NY
230	60462	15363	9/14/1994	CER	UG	SE	NW	16S 48E 15	0.030	IRR		2.5	10	AFA	NY
230	60455	15696	9/14/1994	CER	UG	NW	NW	16S 48E 15	0.030	IRR		2.5	10	AFA	NY
230	60450	14925	9/14/1994	CER	UG	NW	NW	16S 48E 15	0.020	IRR		1.36	5.44	AFA	NY
230	60439		9/12/1994	PER	UG	NE	NW	16S 48E 15	0.120	IRR		9.08	33.32	AFA	NY
230	60438		9/12/1994	PER	UG	SE	NW	16S 48E 15	0.150	IRR		10	40	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	60437	14999	9/12/1994	CER	UG	NW	NW	16S 48E 15	0.030	IRR		2.5	10	AFA	NY
230	60435	15810	9/12/1994	CER	UG	NW	NW	16S 48E 15	0.020	IRR		2.5	7.2	AFA	NY
230	60434	15324	9/12/1994	CER	UG	SW	NW	16S 48E 15	0.030	IRR		2.5	8	AFA	NY
230	60433	14924	9/12/1994	CER	UG	NW	NW	16S 48E 15	0.030	IRR		2.5	10	AFA	NY
230	60431	15631	9/9/1994	CER	UG	SW	NW	16S 48E 15	0.030	IRR		2.27	9.08	AFA	NY
230	60233		7/22/1994	PER	UG	NW	NW	16S 48E 15	0.040	IRR		2.5	10	AFA	NY
230	60162	15301	6/27/1994	CER	UG	NW	NW	16S 48E 15	0.030	IRR		2.5	10	AFA	NY
230	55156	14283	8/7/1990	CER	UG	NW	SW	16S 48E 10	0.240	IRR		5	25	AFA	NY
230	49885	13475	5/20/1986	CER	UG	SE	NW	17S 48E 12	0.250	IRR		13	65	AFA	NY
230	49804	13202	3/31/1986	CER	UG	SE	SE	16S 49E 26	0.010	QM		0	0.04	MGA	NY
230	49220	13040	7/24/1985	CER	UG	NE	NE	16S 49E 28	0.890	IRR		14.7	73.5	AFA	NY
230	45740	12833	6/2/1982	CER	UG	NE	NW	16S 49E 27	0.020	QM		0	1.1	MGA	NY
230	45163	14014	12/29/1981	CER	UG	SE	SW	17S 49E 02	0.440	QM	Y	0	3.18	MGA	NY
230	45162	14013	12/29/1981	CER	UG	SE	SW	17S 49E 02	0.440	QM	Y	0	3.18	MGA	NY
230	43524	11303	4/13/1981	CER	UG	NE	NE	17S 49E 09	1.450	IRR		125.6	628	AFA	NY
230	40954	11260	3/26/1980	CER	UG	SE	SE	16S 49E 22	0.170	IRR		9.53	47.69	AFA	NY
230	38363	10657	6/18/1979	CER	UG	SE	NE	16S 48E 26	1.660	IRR		116.67	583.35	AFA	NY
230	38127	9939	5/10/1979	CER	UG	SE	NW	16S 48E 26	1.660	IRR		116.67	583.33	AFA	NY
230	36584	10676	1/31/1979	CER	UG	NW	NW	16S 48E 15	0.040	IRR		5	10	AFA	NY
230	35592		7/5/1978	PER	UG	SE	SW	17S 48E 01	0.500	QM		0	3.08	MGA	NY

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	31727	9318	5/16/1977	CER	UG	SE	SW	16S 49E 09	0.160	IRR		5	25	AFA	NY
230	31204	10684	3/21/1977	CER	UG	NW	NE	16S 49E 08	0.010	IRR		4.56	2.78	AFS	NY
230	30411	9788	7/22/1976	CER	UG	NE	SE	16S 48E 23	2.140	IRR		151	606.45	AFA	NY
230	29521	9265	7/1/1975	CER	UG	SE	SW	16S 49E 09	0.160	IRR		5	25	AFA	NY
230	29452	9945	6/16/1975	CER	UG	SE	NE	17S 49E 29	0.080	MM	Y	0	1.62	MGA	NY
230	29451	9944	6/16/1975	CER	UG	SW	NW	17S 49E 28	0.080	MM	Y	0	1.62	MGA	NY
230	29069	8680	12/19/1974	CER	UG	NE	NE	16S 49E 08	0.240	IRR	Y	6.18	30.9	AFA	NY
230	28777	10664	10/7/1974	CER	UG	SE	NW	17S 49E 02	0.100	QM		0	2.77	MGA	NY
230	26718	8438	5/12/1972	CER	UG	NE	NE	16S 49E 08	0.100	IRR	Y	3.78	18.9	AFA	NY
230	26152	8652	6/2/1971	CER	UG	SW	SE	16S 48E 08	1.000	IRR		12	60	AFA	NY
230	25744	10309	8/6/1970	CER	UG	NW	SW	16S 48E 10	0.210	IRR		4.5	22.5	AFA	NY
230	25743	10308	8/6/1970	CER	UG	NW	SW	16S 48E 10	0.140	IRR		3.5	17.5	AFA	NY
230	25742	10307	8/6/1970	CER	UG	NW	SW	16S 48E 10	0.140	IRR		3.5	17.5	AFA	NY
230	25636	7696	5/28/1970	CER	UG	SW	SE	16S 49E 05	0.040	IRR		18	7.04	AFA	NY
230	22233	7532	8/30/1964	CER	UG	NE	NE	16S 48E 36	0.760	IRR		38	145	AFA	NY
230	21584	6661	10/15/1963	CER	UG	SE	SE	17S 49E 08	0.810	IRR	Y	185.95	500	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	20352	5764	3/8/1962	CER	UG		LT10	16S 48E 36	2.940	IRD		233.9	980	AFS	NY
230	20162	6236	11/21/1961	CER	UG	NE	NW	16S 49E 35	0.570	IRR	Y	30	120	AFA	NY
230	19034	6705	7/18/1960	CER	UG	SE	SE	17S 49E 08	1.350	IRR	Y	185.95	500	AFA	NY
230	18764	7276	4/28/1960	CER	UG	NE	NE	16S 48E 08	0.850	IRR		52.5	173.5	AFS	NY
230	18222	6610	8/10/1959	CER	UG	NE	NW	16S 49E 30	2.890	IRR	Y	268.5	717.5	AFA	NY
230	17404	5158	10/2/1957	CER	UG	NE	SW	16S 48E 25	2.500	IRR		160	800	AFA	NY
230	16545	5477	6/2/1955	CER	UG	NE	NE	16S 49E 28	2.500	IRD		21.98	109.9	AFA	NY
230	15893	5717	12/13/1954	CER	UG	NE	NE	16S 48E 23	2.640	IRR		160	603	AFA	NY
230	14059	5156	2/20/1952	CER	UG	NW	SW	17S 48E 01	2.010	IRD	Y	80	251.2	AFA	NY
230	14054	6019	2/18/1952	CER	UG	SE	NE	17S 48E 12	1.520	IRR		25.4	127	AFA	NY
137A	11321	4797	6/29/1945	CER	UG	NE	NE	3N 42E 14	0.020	IRR	Y	15.03	60.1	AFA	NY
137A	10501	4795	5/9/1940	CER	UG	SE	NE	3N 42E 14	0.150	IRR	Y	0	60.1	AFA	NY
137A	10493	4794	4/10/1940	CER	UG	NE	NE	3N 42E 15	0.150	IRR	Y	15.03	60.1	AFA	NY
137A	13115	5284	10/18/1949	CER	STR	SE	NW	3N 42E 34	1.000	IRR		10	40	AFA	ES
169A	4721	1577	11/19/1917	CER	SPR	SE	SE	2S 58E 11	0.000	STK		0	0.18	MGA	LI
169A	V01510		5/17/1917	VST	SPR	NE	NE	3S 58E 16	0.100	STK		0	0		LI
169A	V01507		5/17/1917	VST	SPR	SE	SE	3S 58E 17	0.050	STK		0	0		LI
169A	V01506		5/17/1917	VST	SPR	NW	NW	3S 58E 33	0.050	STK		0	0		LI
143	52921		2/9/1989	PER	UG	SW	NE	2S 39E 10	5.000	MM	Y	0	3619.85	AFA	ES

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
143	52920		2/9/1989	PER	UG	SW	NE	1S 40E 23	5.000	MM	Y	0	3619.85	AFA	ES
143	52919		2/9/1989	PER	UG	SW	NE	2S 39E 13	5.000	MM	Y	0	3619.85	AFA	ES
143	52918		2/9/1989	PER	UG	NW	SE	1S 40E 19	5.000	MM	Y	0	3619.85	AFA	ES
143	49988	14295	7/15/1986	CER	UG	SE	SW	1S 40E 34	2.000	MM	Y	0	1448	AFA	ES
143	44270	12782	8/10/1981	CER	UG	SW	NE	2S 40E 20	1.000	MM	Y	0	235.9	MGA	ES
143	44268	12780	8/10/1981	CER	UG	SW	NE	1S 40E 26	0.460	MM	Y	0	108.98	MGA	ES
143	44267	12779	8/10/1981	CER	UG	SW	NE	1S 40E 33	0.440	MM	Y	0	103.78	MGA	ES
143	44261	12778	8/10/1981	CER	UG	SW	NE	2S 40E 19	0.220	MM	Y	0	159.27	MGA	ES
143	44253	12772	8/10/1981	CER	UG	SW	NE	2S 39E 13	0.840	MM	Y	0	198.15	MGA	ES
143	44252	12771	8/10/1981	CER	UG	SW	NE	2S 39E 10	0.430	MM	Y	0	101.43	MGA	ES
143	44251	12770	8/10/1981	CER	UG	SW	NE	2S 39E 01	1.000	MM	Y	0	235.91	MGA	ES
147	62503		10/7/1996	PER	UG	NW	SE	2S 49E 22	0.500	QM		0	361.98	AFA	NY
147	54178	15421	11/16/1989	CER	UG	SW	NW	3S 50E 05	0.080	QM		0	5.89	MGA	NY
198	52000	13653	4/11/1988	CER	UG	SE	NE	1S 69E 06	2.000	IRR		59.24	269.2	AFS	LI
198	48410	13645	9/18/1984	CER	UG	SE	NE	1S 69E 06	1.000	IRR	Y	161.73	545.46	AFS	LI
198	48184	13644	7/12/1984	CER	UG	SE	NE	1S 69E 06	2.500	IRR	Y	113.43	567.15	AFS	LI
198	39270	13638	10/2/1979	CER	UG	SW	NE	1S 69E 06	1.250	IRR	Y	161.73	681.82	AFS	LI
198	24219	8728	11/13/1967	CER	UG	SE	NE	1S 69E 06	2.100	IRR	Y	50	200	AFS	LI
198	21497	6547	9/3/1963	CER	UG	SW	SE	1S 69E 06	1.120	IRR	Y	313.35	406.44	AFS	LI
198	20829	7402	11/5/1962	CER	UG	SE	NE	1S 69E 06	2.100	IRR	Y	128.5	642.5	AFA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
198	14600	4805	10/27/1952	CER	UG	SE	SE	1S 69E 06	3.000	IRR	Y	153.5	614	AFA	LI
198	13803	4994	8/22/1951	CER	UG	NW	NE	1S 69E 07	3.000	IRR	Y	248.12	1240.6	AFA	LI
198	37561	15183	4/2/1979	CER	UG	SW	SE	1N 69E 34	1.200	IRD	Y	114.4	572	AFA	LI
198	37560	15182	4/2/1979	CER	UG	SW	NW	1S 69E 02	1.200	IRR	Y	36.6	183	AFA	LI
198	24509	9259	5/23/1968	CER	UG	SW	NW	1N 69E 32	3.150	IRD	Y	136.9	684.5	AFA	LI
198	22469	7896	3/2/1965	CER	UG	NE	SW	1N 69E 32	2.530	IRD	Y	31.8	127.2	AFA	LI
198	16493	5629	5/25/1955	CER	UG	SE	SW	1N 69E 31	1.700	IRR	Y	82.59	413	AFA	LI
198	24402	15121	3/13/1968	CER	STR	NW	NE	1N 69E 32	0.000	REC		0	1400	AFA	LI
199	20833	7144	11/7/1962	CER	UG	SW	NE	1N 69E 21	2.630	IRR		105.3	526.5	AFA	LI
200	21783	6935	2/3/1964	CER	UG	SE	SE	1N 69E 10	1.000	IRR		33	165	AFA	LI
200	V02933		6/21/1977	DEC	SPR	NE	NE	2N 69E 35	13.560	DEC		542.72	2713.6	AFA	LI
202	65639		10/28/1999	PER	UG	SE	NW	2N 67E 22	0.900	IRR	Y	120	274.56	AFA	LI
202	63200	16176	6/20/1997	CER	UG	NW	SW	2N 67E 22	2.220	IRD	Y	360	502.64	AFA	LI
202	63199	16175	6/20/1997	CER	UG	NE	NE	2N 67E 21	2.220	IRD	Y	360	502.64	AFA	LI
202	58447	14493	12/30/1992	CER	UG	NE	NW	2N 67E 21	1.890	IRD	Y	78	224.23	AFA	LI
202	58314	14152	11/9/1992	CER	UG	NW	SE	1N 68E 07	2.700	IRD		160	640	AFA	LI
202	56962	14540	11/26/1991	CER	UG	SE	NE	1N 67E 14	0.500	MUN	Y	0	26.07	MGA	LI
202	53930		10/12/1989	PER	UG	SE	NE	1N 67E 14	0.420	MUN	Y	0	99.08	MGA	LI
202	50046	13865	7/28/1986	CER	UG	NE	SE	1N 67E 12	1.120	MUN	Y	0	62.83	MGA	LI
202	49041	14141	5/9/1985	CER	UG	NW	SE	1N 68E 07	2.700	IRD		160	640	AFA	LI
202	48540	14229	11/6/1984	CER	UG	SE	SW	2N 67E 16	2.850	IRR	Y	400	537.04	AFA	LI

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
202	46205	14228	10/8/1982	CER	UG	NW	NW	2N 67E 21	1.000	IRD	Y	62.84	251.36	AFA	LI
202	41411	12350	5/21/1980	CER	UG	NW	NW	2N 67E 21	1.700	IRR	Y	75.83	303.32	AFA	LI
202	23150	8027	5/25/1966	CER	UG	SE	SW	1N 67E 12	0.390	MUN		0	92	MGA	LI
202	23149	8026	5/25/1966	CER	UG	NE	SE	1N 67E 12	0.780	MUN		0	184.01	MGA	LI
202	11032	3179	12/2/1943	CER	UG	SE	NW	1N 67E 23	0.150	MUN		0	36.5	MGA	LI
205	24461	7822	5/3/1968	CER	UG	NE	NW	4S 67E 08	0.350	IRR		5.27	26.35	AFA	LI
205	45945	10739	7/16/1982	CER	UG	SW	NW	5S 66E 02	2.370	IRR		66.9	334.5	AFA	LI
205	58003	14121	8/25/1992	CER	UG	NW	NE	7S 67E 20	1.670	IRR		54.31	271.55	AFA	LI
205	21586	6988	10/17/1963	CER	UG	NW	SW	7S 67E 21	1.500	IRR		31.44	157.2	AFA	LI
205	V01262		9/6/1913	DEC	STR	SE	SE	4S 66E 34	1.690	DEC		67.7	338.5	AFA	LI
205	V01245		5/22/1913	DEC	STR	SE	NE	5S 66E 27	0.910	DEC		36.48	182.4	AFA	LI
209	35054	10690	3/3/1978	CER	UG	SW	SW	4S 60E 11	1.160	IRR	Y	75.8	379	AFA	LI
209	27730	11006	9/4/1973	CER	UG	NE	NE	4S 60E 02	3.870	IRR	Y	280.77	1403.85	AFA	LI
209	27729	11005	9/4/1973	CER	UG	NE	NE	4S 60E 02	3.620	IRR	Y	280.77	1403.85	AFA	LI
209	20544	6859	6/27/1962	CER	SPR	NW	SE	4S 60E 14	3.000	IRR		633.6	2171.39	AFA	LI
230	61412	16384	7/19/1995	CER	UG	SW	NW	12S 46E 35	0.890	DWR	Y	0	103.42	MGA	NY
230	70142		6/23/2003	PER	UG	NW	NE	16S 48E 16	2.080	IRR	Y	120	500	AFA	NY
230	69730		3/13/2003	PER	UG	NE	SE	16S 49E 28	1.230	COM		0	110	AFA	NY
230	66370		5/16/2000	PER	UG	SW	SE	16S 49E 22	0.320	IRR		17.12	85.59	AFA	NY
230	66121		3/7/2000	PER	UG	NW	SW	13S 46E 03	1.000	MUN	Y	0	140.7	MGA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	66120		3/7/2000	PER	UG	NW	SW	13S 46E 03	1.000	MUN	Y	0	140.7	MGA	NY
230	65144		5/27/1999	PER	UG	NE	NE	17S 49E 09	0.550	COM	Y	0	100	AFA	NY
230	62116	16273	5/9/1996	CER	UG	NW	NE	17S 49E 10	0.550	COM	Y	0	264	AFA	NY
230	62115		5/9/1996	PER	UG	NE	NE	17S 49E 09	0.550	COM	Y	0	264	AFA	NY
230	61413	16385	7/19/1995	CER	UG	NW	SW	13S 46E 03	0.890	MUN	Y	0	200	MGA	NY
230	52616		10/19/1988	PER	UG	SW	SE	16S 48E 08	0.200	IRR		30	150	AFA	NY
230	50385	14656	12/1/1986	CER	UG	NW	NE	16S 49E 16	0.100	QM		0	10.6	MGA	NY
230	49947	12435	6/26/1986	CER	UG	NE	NW	16S 48E 10	1.750	IRR		56.38	281.9	AFA	NY
230	47223		9/1/1983	PER	UG		LT12	16S 49E 31	0.200	QM		0	12.05	MGA	NY
230	47205		8/29/1983	PER	UG	SW	SE	16S 49E 31	0.200	QM		0	12.05	MGA	NY
230	43873	12460	6/11/1981	CER	UG	SW	NW	16S 48E 24	1.660	IRR		116.67	545.38	AFA	NY
230	42171		8/25/1980	PER	UG	SW	SE	16S 48E 08	0.270	IRR		60	150	AFA	NY
230	27812	9927	10/4/1973	CER	UG	NE	NW	17S 48E 12	2.540	MM	Y	0	75.59	MGA	NY
230	26283	7987	8/31/1971	CER	UG	NW	NW	16S 48E 18	1.670	IRD		160	610.55	AFA	NY

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	24763	7219	11/18/1968	CER	UG	NE	NE	16S 49E 08	0.590	IRR		26.69	110.83	AFA	NY
230	24725	7107	10/21/1968	CER	UG	SE	NW	16S 48E 18	2.700	IRR		155.49	777.45	AFA	NY
230	24585	6951	7/17/1968	CER	UG	SE	SW	16S 49E 09	0.750	IRR		23.75	118.75	AFA	NY
230	22761	8118	9/7/1965	CER	UG	NE	NE	16S 48E 24	0.280	IRR	Y	160	202.65	AFA	NY
230	22746	6032	8/31/1965	CER	UG	NE	SE	16S 49E 19	2.500	IRR		160	800	AFA	NY
230	19917	8119	6/12/1961	CER	UG	NE	SE	16S 48E 24	2.500	IRR	Y	160	800	AFA	NY
230	19916	8120	6/12/1961	CER	UG	NE	NE	16S 48E 24	2.500	IRR		160	800	AFA	NY
230	19448	6676	1/16/1961	CER	UG	SW	NW	16S 48E 07	0.580	IRD		37	183.01	AFA	NY
230	19197	6675	9/12/1960	CER	UG	NW	SE	16S 49E 22	0.340	IRR		184.19	100.46	AFA	NY
230	17417	5888	10/14/1957	CER	UG	NW	NE	16S 48E 17	2.000	IRR		45.82	229.1	AFA	NY

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
230	16562	5837	6/13/1955	CER	UG	NE	NE	16S 48E 16	2.080	IRD	Y	105	425.25	AFA	NY
230	16047	5593	2/7/1955	CER	UG	NE	SW	16S 49E 09	1.330	IRR		4	200	AFA	NY
230	15881	5700	12/6/1954	CER	UG	NE	NW	16S 48E 10	0.840	IRD		90.62	253.1	AFA	NY
230	15702	6444	6/11/1954	CER	UG	NE	SE	16S 48E 14	1.000	IRD		35	175	AFA	NY
230	22941	8255	1/27/1966	CER	UG	SW	NE	16S 49E 18	0.250	QM		0	0.22	MGA	NY
230	24370	6851	2/14/1968	CER	STR	NW	NW	12S 47E 20	2.550	IRR		114.9	459.6	AFA	NY
230	20	523X	10/31/1905	CER	STR	NE	NE	12S 47E 19	1.000	MM		0	235.9	MGA	NY
230	53620	14329	6/30/1989	CER	SPR	NW	NE	17S 50E 22	0.790	WLD		0	572.62	AFA	NY
230	53612	14327	6/30/1989	CER	SPR	NW	NE	17S 50E 15	1.330	WLD		0	965.13	AFA	NY
230	53609	14324	6/30/1989	CER	SPR	SE	NE	17S 50E 09	2.270	WLD		0	1647.52	AFA	NY
230	53607	14342	6/30/1989	CER	SPR	SE	NE	17S 50E 09	0.910	WLD		0	659.6	AFA	NY
230	53601	14339	6/30/1989	CER	SPR	NW	NE	17S 50E 22	0.710	WLD		0	514.5	AFA	NY
230	53600	14338	6/30/1989	CER	SPR	NW	NE	17S 50E 22	0.630	WLD		0	459	AFA	NY
230	53613	14328	6/30/1989	CER	SPR	NW	NE	17S 50E 15	0.380	WLD		0	280.1	AFA	NY
230	53602	14340	6/30/1989	CER	SPR	NW	NE	17S 50E 22	0.300	WLD		0	219.8	AFA	NY
137A	49620	12153	1/7/1986	CER	UG	NW	SE	2N 40E 15	0.001	STK		0	235.85	MGA	ES
137A	44454	11789	9/21/1981	CER	UG	SE	NW	3N 42E 13	0.180	MUN		0	19.21	MGA	NY
137A	10502	4796	5/9/1940	CER	UG	NE	NW	3N 42E 13	0.120	IRR	Y	15.03	60.1	AFA	NY

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
137A	49619	12104	1/7/1986	CER	STR	NW	NE	2N 40E 15	0.220	STK		0	235.85	MGA	ES
227B	71655		9/7/2004	APP	UG	SE	SW	9S 50E 25	5.000	QM		0	0	AFA	NY
148	45271	12305	2/1/1982	CER	UG	SE	NW	1N 48E 32	0.007	STK		0	1.65	MGA	NY
148	50169	14160	9/19/1986	CER	UG	NE	NW	2S 46E 12	0.340	QM		0	79.22	MGA	NY
205	60447E		9/13/1994	PER	UG	NW	SW	4S 67E 08	0.080	OTH		0	64.51	AFA	LI
230	69314		11/7/2002	PER	UG	SE	SE	15S 50E 18	0.280	QM	Y	0	43	AFA	NY
230	69313		11/7/2002	PER	UG	SE	SE	15S 50E 18	0.240	QM	Y	0	37	AFA	NY
205	11581	3720	5/24/1946	CER	UG	SW	NW	4S 67E 08	0.600	DOM		0	33.9	MGA	LI
205	31045	10372	1/31/1977	CER	UG	SE	SE	4S 66E 13	0.340	IRR		14.58	72.91	AFA	LI
205	31044	10371	1/31/1977	CER	UG	SE	SE	4S 66E 24	0.150	IRR		5.9	29.55	AFA	LI
205	29834	10491	12/4/1975	CER	UG	SE	SW	4S 67E 07	0.110	IRR		17.7	80.34	AFA	LI
205	29338	9059	4/8/1975	CER	UG	SE	NE	4S 66E 24	1.340	IRR		70.72	353.62	AFA	LI
205	28560	9057	8/1/1974	CER	UG	SW	SW	4S 67E 18	2.400	IRR		22.82	114.14	AFA	LI
205	28559	9056	8/1/1974	CER	UG	SE	NW	4S 67E 18	2.500	IRR		49	245.03	AFA	LI
205	28558	9055	8/1/1974	CER	UG	SE	SE	4S 66E 13	2.000	IRR		87.94	439.73	AFA	LI
205	18910	7014	6/8/1960	CER	UG	NE	NW	4S 67E 18	2.220	IRR		110.24	551.22	AFS	LI
205	17921	5201	3/31/1959	CER	UG	NW	SE	4S 67E 07	0.450	IRR		21.19	105.95	AFA	LI
205	10614	3211	1/27/1941	CER	UG	SE	NW	4S 66E 25	0.400	IRR		40.8	147.83	AFS	LI
205	V02311		9/8/1941	DEC	SPR	NE	SW	4S 67E 08	1.000	DEC		40.2	201	AFA	LI
205	V01704		6/1/1920	DEC	STR	NW	SW	4S 66E 35	3.470	DEC		139.1	695.5	AFA	LI
230	2501	368	9/4/1912	CER	STR	NE	SE	12S 47E 09	0.300	MM		0	70.77	MGA	NY
230	1746	368	7/7/1910	CER	STR	NE	SE	12S 47E 09	0.030	MM		0	70.77	MGA	NY
205	49893	14323	5/23/1986	CER	UG	SW	NE	4S 67E 08	1.450	MUN	6846.4	0	215.5	MGA	LI
205	49892		5/23/1986	PER	UG	SW	NE	4S 67E 08	1.500	MUN		0	353.85	MGA	LI
205	25970	8076	2/18/1971	CER	UG	SW	NW	4S 67E 08	2.000	MUN	0	0	471.81	MGA	LI
205	23933	8080	6/12/1967	CER	UG	SW	NW	4S 67E 08	4.000	MUN	0	0	943.62	MGA	LI
205	19377	5548	12/8/1960	CER	UG	NE	SE	4S 67E 07	1.000	MUN		0	235.91	MGA	LI
205	10662	3052	5/14/1941	CER	UG	NW	SW	4S 67E 08	1.000	MUN		0	235.96	MGA	LI

Hydrographic Basin Abstracts - Non-CRC Basins

Selection Criteria: by PER, CER, VST, DEC (Surface and Underground)

Basin	APP	CERT	DATE	STAT	SRC	QQ	QTR	TRS	CFS	USE	SUP	ACRES	DUTY	UNIT	CO
137A	22690	6201	7/15/1965	CER	UG	SE	SE	3S 42E 03	2.000	MUN		0	1447.94	AFA	ES

Appendix D

Appendix D – Decision Matrix (Water Resources Decision Support)

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity		D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
227A	Forty-mile Canyon, Jackass Flats	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	Begin process to obtain permits for water appropriation in Phase II
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		**Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC**
					NO		YES (Go to D5.3.1)		NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
229	Crater Flat	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
228	Oasis Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	Begin process to obtain permits for water appropriation in Phase II
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity		D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
146	Sarcobatus Flat	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES	(Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO	(Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
144	Lida Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	Begin process to obtain permits for water appropriation in Phase II
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES	(Go to D5.3.1)	NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO	(Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
145	Stonewall Flat	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES	(Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in the Basin in Phase II
							NO	(Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin

Appendix D – Decision Matrix (Water Resources Decision Support)

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity	D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
142	Alkali Spring Valley	YES	YES	YES		NO					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)	YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
										NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)			NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)	NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)						NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO									Groundwater is not a resource option in the Basin
141	Ralston Valley	YES	YES	YES		NO					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)	YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
										NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)			NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO (Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)						NO	**Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin**
		NO									Groundwater is not a resource option in the Basin
149	Stone Cabin Valley	YES	YES	YES		NO					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)	YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
										NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)			NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)	NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)						NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO									Groundwater is not a resource option in the Basin

Appendix D – Decision Matrix (Water Resources Decision Support)

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity		D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
156	Hot Creek Basin	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
173A	Railroad Valley, South	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
173B	Railroad Valley, North	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin

Appendix D – Decision Matrix (Water Resources Decision Support)

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity		D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
170	Penoyer Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES	(Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO	(Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO			(Go to D5.3.1 New Well Development)					NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
172	Garden Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES	(Go to D5.3.1)	NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO	(Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO			(Go to D5.3.1 New Well Development)					NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
171	Coal Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES	(Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO	(Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO			(Go to D5.3.1 New Well Development)					NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity	D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
207	White River Basin	YES	YES	YES		NO					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)	YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
										NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)			NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)	NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)						NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO									Groundwater is not a resource option in the Basin
208	Pahroc Valley	YES	YES	YES		NO					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)	YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
										NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)			NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO (Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)						NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO									Groundwater is not a resource option in the Basin
181	Dry Lake Valley	YES	YES	YES		NO					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)	YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
										NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)			NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)	NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO (Go to Decision)				Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)						NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO									Groundwater is not a resource option in the Basin

Appendix D – Decision Matrix (Water Resources Decision Support)

Basin No.	Basin Name	D5.1.1 Viable Groundwater Occurrence in Basin	D5.1.2 Designated Status	D5.2.1 Water District or Municipality	D5.2.2 Majority of Permits for Non-Preferred Uses	D5.2.3 Purchase Potential	D5.2.4 Lease Opportunity		D5.3.1 Consider New Well Development	D5.3.2 Ground-water < 500 ft./ Suitable Aquifers	D5.3.3 Infrastructure Feasible	Decision
203	Panaca Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	Begin process to obtain permits for water appropriation in Phase II
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
197	Escalante Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin
204	Clover Valley	YES	YES	YES		NO						Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
						YES	(Go to D5.3.1 New Well Development)		YES	YES	YES	**Begin process to obtain permits for water appropriation in Phase II**
											NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
				NO	YES	(Go to D5.3.1 New Well Development)				NO		Geologic Environment Unfavorable for Groundwater as a Water Resource in the SC
					NO		YES (Go to D5.3.1)		NO		YES	**Begin negotiation with High-Priority permit holders or water districts in Basin in Phase II**
							NO (Go to Decision)					Regulatory Environment Unfavorable for Groundwater as a Water Resource in the Basin
			NO	(Go to D5.3.1 New Well Development)							NO	Infrastructure Constraints to Development of Groundwater as a Water Resource in the Basin
		NO										Groundwater is not a resource option in the Basin

Well Data Within 1-Mile of CRC

Appendix E

NDWR Wells (With Matched Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Twp	Rng	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.	Water Right USE
173A	85358	I	02N	53E	16	NE NW	5/11/2001	440	440	16	130		2500	31568	IRR
142	8817	K	03S	42E	10		3/6/1965	440	440	8.62	31		50	22690	MUN
146	14371	I	08S	44E	2	NE NW	3/15/1968	203	203	14	52		30	28186	IRR
146	38909	P	08S	44E	11	SE NE	9/7/1992	100	100	8	7		0	57961	QM
149	29844	Z	01N	46E	25	NE SW	6/10/1959	250	250	8	108.6		200	56916	QM
149	32284	P	01S	46E	2	NW NE	9/1/1989	650	650	13.38	300		0	53885	QM
149	70886	I	01N	46E	26	SE NE	3/30/1998	400	350	16	100	65	2000	63100	IRR
149	70921	I	01N	46E	26	SE NW	4/12/1998	500	200	16	103	65	250	64415	IRR
171	61527	S	01N	59E	21	SW SW	10/31/1996	1880	911	10.75	151		350	62615	STK
172	10132	S	01S	57E	2	NW NW	1/1/1944	500	500	0	450		0	11047	STK
181	10864	I	03S	63E	22	NW NE	3/2/1966	230	230	14	3		0	22477	IRD
203	1833	I	02S	67E	25	NW NE	11/6/1951	132	132	12	14		0	14834	IRR
203	717	C	04S	67E	5	SE SW	11/15/1948	58	58	5.75	22		0	25711	COM
203	5471	I	02S	67E	35	SE NE	10/3/1960	183	183	14	28		0	19328	IRR
203	1590	I	02S	67E	25	NE SW	3/15/1951	150	150	14	18		0	14193	IRR
203	3224	I	03S	67E	2	NE NE	10/21/1955	145	140	12	22		240	10639	IRR
203	3301	I	02S	68E	19	SW SW	1/1/1956	125	100	12	0		0	11968	IRR
203	4067	I	03S	67E	2	NW SE	5/2/1958	158	140	12	24		0	23105	IRR
203	5014	I	02S	68E	19	SW SE	1/27/1960	178	164	12	4		0	20154	IRR
203	5625	I	02S	67E	26	NE SE	12/16/1960	115	115	14	29		350	19788	IRD
203	7143	I	03S	67E	2	SE SW	4/13/1963	163	156	10	21		0	21206	IRR
203	7145	I	02S	67E	26	SW SE	4/29/1963	65	65	10	29		120	21452	IRR
203	7497	I	02S	67E	26	NE SE	12/16/1960	115	115	14	29		350	19789	IRD
203	7498	I	02S	67E	25	SW SW	1/31/1961	187	187	14	27		0	19790	IRD
203	8369	I	02S	67E	24	SE SW	2/13/1965	172	172	14	27		1000	22935	IRR
203	8590	I	02S	67E	25	NW NE	11/11/1951	132	132	12	14		0	20264	IRD
203	9272	I	03S	67E	28	NE SW	9/19/1962	118	118	14	0		0	20851	IRR
203	9428	S	02S	67E	24	NE SE	2/19/1948	40	40	8	20		0	21236	IRR
203	9429	I	02S	67E	24	NE SE	9/24/1950	100	100	12	9		0	21237	IRR
203	9597	I	03S	67E	15	SW SE	1/1/1967	300	300	16	3		0	57679	IRR
203	9927	C	04S	67E	5	NE SW	12/1/1967	75	75	10	25		0	24407	COM
203	20679	N	04S	67E	5	SW SW	10/25/1979	75	75	8	32		100	25711	COM
203	73128	I	03S	67E	2	SE SW	7/30/1998	400	400	12.75	22		250	21206	IRR
203	75154	I	03S	67E	2	SE SW	11/8/1998	160	160	16	53		350	21206	IRR
203	92588	I	02S	67E	24	SE NW	10/30/2003	200	200	16	42	56	650	69447	IRR
203	92591	I	02S	67E	24	NE SE	12/9/2003	105	105	12.75	0		0	21237	IRR
203	92837	I	02S	67E	24	NE SE	3/20/2004	240	240	16	19		2400	21237	IRR
205	853	I	04S	67E	8	NE NE	3/17/1949	90	90	10	24		0	12708	IRR

NDWR Wells (With Matched Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Twp	Rng	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.	Water Right USE
205	2436	C	04S	67E	7	NE SE	11/23/1953	190	190	12	14		700	19377	MUN
205	8924	P	04S	67E	8	NW NE	3/5/1966	195	195	14	18		0	23933	MUN
205	10340	I	04S	67E	9	SE NE	3/7/1968	115	110	12	29		0	24603	IRR
205	10991	I	04S	67E	8	NE NW	1/1/1957	75	75	8	20		0	24461	IRR
205	11809	P	04S	67E	8	SW NW	3/18/1970	165	165	20	16	60	640	25970	MUN
205	13424	S	04S	67E	9	SW NW	9/14/1970	52	52	12	10		250	26762	STK
205	21183	J	04S	67E	8	NW NW	11/13/1975	115	115	6	10	107	35	37106	OTH
205	31521	P	04S	67E	8	NW NW	11/12/1984	107	107	8	7	99	100	48455	REC
229	32642	N	12S	48E	4	NW SE	9/1/1989	1600	1600	16	660		0	52847	MM

*** Notes**

Proposed Use Codes:					
A	Air conditioning (AC)	**J**	Industrial-Cooling (IND)	**U**	Unused (UNU)
B	Bottling (BOT)	**K**	Mining (MM)	**X**	Test Well (TST)
C	Commercial (COM)	**M**	Medicinal (MED)	**Y**	Deslination (DES)
D	Dewater (DWR)	**N**	Industrial (IND)	**Z**	Other (OTH)
E	Power (PWR)	**P**	Public Supply-Municipal (MUN)		
F	Fire (FIR)	**Q**	Aquaculture (AQC)		
G	Monitoring Well (MON)	**R**	Recreation (REC)		
H	Domestic (DOM)	**S**	Stock (STK)		
I	Irrigation (IRR)	**T**	Institution (INS)		

NDWR Wells (Unmatched to Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Township	Range	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.
205	444	I	04S	67E	9	SW NE	3/14/1948	43	43	8	18		15	
205	445	I	04S	67E	9	SW NE	3/6/1948	40	40	8	11		15	
203	477	I	03S	67E	2	NE	12/3/1947	135	126	9.75	21			
203	1271	I	02S	67E	25	SW SW	4/15/1950	150	150	14	23		1020	14487
173A	1471	S	03N	52E	11	SE	10/25/1950	60	60		20			
156	1793	S	04N	51E	29	SE	9/6/1951	137	137	5	95		20	
205	1805	C	04S	67E	8	NW SW	11/28/1951	90	90	12	12			
204	2104	C	04S	68E	8	SW	11/29/1952	185	185	10	8			
203	2444	I	03S	67E	22	SW NE	12/16/1953	92	92	12	2			
203	3847	C	03S	67E	28	NW SW	7/20/1957	50	34	8				
146	4071	I	07S	44E	35		4/16/1958	370	370	16	132			
149	4441	S	01N	46E	31	SE SW		117	117	6	75			13311
172	5085	S	03N	58E	15	SE	1/20/1960	260	260	6	235			
203	5707	I	02S	67E	25	NW SW	2/14/1961	135	100	14	27		500	
146	6409	I	08S	44E	12	SE SW	2/16/1962	125	125	16				28625
203	6551	I	03S	67E	22	NW NE	5/15/1962	175	175	14	3			19929
205	6561	Z	04S	67E	7		5/26/1962	52	52	8	12			
203	7144	I	03S	67E	11	NW NE	4/15/1963	204	184	14	18			
203	7323	I	03S	67E	15	SW SE	7/27/1963	128	128	14	13			
203	7408	I	02S	67E	24	NW NW	9/26/1963	102	102	14	40		650	30244
203	7597	I	02S	67E	24	NE NW	12/31/1963	99	99	14	44			21634
203	8034	I	02S	67E	24	SE SW	3/29/1961	150	132	12	28			20514
203	8059	C	03S	67E	2	NW NE	8/17/1964	105	105	6.62	26			
203	8060	I	03S	67E	2	NW NE	8/27/1964	166	166	14	30			
203	8854	I	02S	67E	35	SE SW	2/2/1966	218	150	14	34		220	22940
203	9588	I	02S	67E	24	NW NW	4/1/1967	180	170	14	47	59	2000	22036
203	9629	I	02S	67E	14	NE SE	4/29/1967	230	210	14	80	59		21886
203	11194	I	02S	67E	14	NE SE	7/1/1970	120	120	14	64		1850	25301
203	15767	P	02S	67E	35	SW NE	7/2/1976	90	90	8	38		20	29353
172	11369	I	01N	57E	27	NE	5/14/1969	200	200	16	68			22808
203	12479	I	02S	67E	24	NE NW	1/1/1972	190	190	14	62		2450	25635
144	15804	N	05S	43E	3		7/24/1976	102	100	12.75	30		20	
203	15977	P	03S	67E	2	NW SW	1/1/1976	170	170	12	32		130	27643
208	16650	N	02N	62E	25	SE NE	6/18/1977	510		0				
208	17468	N	02N	62E	25	SE NE	9/20/1977	503	503	10	163		60	
203	19308	P	04S	67E	5	NE SW	6/11/1978	203	203	8.62	27		200	35309
203	19309	P	04S	67E	5	NE SW	6/24/1978	185	185	16	27		900	35309
144	25575	Z	04S	43E	22	NE NE	6/12/1984	300						
144	25577	Z	04S	43E	32	SE SE	6/9/1984	500						

NDWR Wells (Unmatched to Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Township	Range	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.
172	26947	N	02N	57E	27	NE SW	3/11/1986	399	399	6	364		27	
146	32115	Z	08S	45E	29	NW SW	5/22/1987	200	200	10	85			
142	43276	P	02S	42E	26	NE SW	11/12/1993	550	550	6	36		112	53031
142	46854	K	02S	42E	26	NW NW	11/14/1994	620	620	10.75	101		0	59089
229	65057	P	12S	48E	4	NW SE	4/20/1997	2112	2100	12.75	692	98	250	62376T
203	65407	P	03S	67E	2	NW SW	4/28/1973	127	127	12	36	42	750	27643
203	65424	I	03S	67E	22		2/1/1966	240	240	14	3		1400	
205	65441	I	04S	67E	7	NE SE	3/16/1976	75	75	10	19		150	
205	65443	I	04S	67E	9	SE NW	2/12/1968	123	123	12	21			
205	65445	I	04S	67E	9	SW NE	7/6/1982	108	106	8	24		30	
142	65724	K	02S	42E	23	NE SW	1/31/1996	205	200	8.62	79		40	50384
203	65775	I	02S	67E	24	SE SW	10/4/1980	171	171	14	40		650	
203	65778	I	02S	67E	25	SE NW	6/7/1973	180	180		30		1500	
203	65782	I	02S	67E	25	SE NE	4/12/1981	141	141	16	13		1300	

*** Notes**

Proposed Use Codes					
A	Air conditioning (AC)	**J**	Industrial-Cooling (IND)	**U**	Unused (UNU)
B	Bottling (BOT)	**K**	Mining (MM)	**X**	Test Well (TST)
C	Commercial (COM)	**M**	Medicinal (MED)	**Y**	Deslination (DES)
D	Dewater (DWR)	**N**	Industrial (IND)	**Z**	Other (OTH)
E	Power (PWR)	**P**	Public Supply-Municipal (MUN)		
F	Fire (FIR)	**Q**	Aquaculture (AQC)		
G	Monitoring Well (MON)	**R**	Recreation (REC)		
H	Domestic (DOM)	**S**	Stock (STK)		
I	Irrigation (IRR)	**T**	Institution (INS)		

NDWR Wells (No Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Township	Range	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.
203	5013	U	02S	68E	19	SE SW	10/29/1959	183			5			
203	7595	U	02S	67E	14	NE SE	12/18/1963	95			66			
173B	21553	X	03N	52E	2	SE	7/31/1980	470	470	10	230	68		41743
205	41543	G	04S	67E	8	SW NW	5/3/1993	25	25	4				
205	41544	G	04S	67E	8	SW NW	5/4/1993	25	25	4	5			
205	41545	G	04S	67E	8	SW NW	5/5/1993	25	25	4	5			
172	22583	X	02N	57E	15	SE NW		1065	970	22				41715
172	22584	X	02N	57E	15	SE NW	8/19/1980	1100	1100					
156	22736	X	03N	50E	13	SW SW		682	682		317	60		41748
156	22742	X	03N	50E	13	SW SW	2/7/1981	710	702		321	66		41748
142	43666	G	02S	42E	35	NW SW	11/15/1992	100	100	2	57		3	
142	43667	G	02S	42E	35	NW SW	11/15/1992	100	100	2	56		2	
203	24427	X	04S	67E	5	NE SW	2/5/1983	100	100	8.62	43.4	175	200	
203	24428	X	04S	67E	5	NE SW	1/20/1983	210	210	2	40	90	0	
203	24429	X	04S	67E	5	NE SW	1/15/1983	220			28	90	200	
142	25123	X	02S	42E	26	NE SW	1/20/1984	560	18	8	70		75	
144	25574	X	05S	43E	10	SW NW	6/14/1984	300	300	1				
205	51131	G	04S	67E	8	NW SW	3/21/1996	20	20	10	6			
142	55111	G	02S	42E	35	NE NW	1/28/1993	100	100	2	30			
142	65001	G	02S	42E	35	NW NW	3/24/1997	59	59	2.37	34			
142	65002	G	02S	42E	35	NW NW	3/26/1997	85	85	2.37	67			
142	65003	G	02S	42E	35	NE NW	3/25/1997	77	77	2.37	55			
205	66215	G	04S	67E	8	NE NW	12/16/1993	33	30	4.5	10			
205	66216	G	04S	67E	8	NE NW	12/16/1993	33	30	4.5	10			
205	66217	G	04S	67E	8	NE NW	12/10/1993	33	30	4.5	10			
205	66218	G	04S	67E	8	NE NW	12/9/1993	33	30	4.5	8			
205	66219	G	04S	67E	8	NE NW	12/11/1993	33	30	4.5	10			
205	66220	G	04S	67E	8	NE NW	12/16/1993	33	30	5	10			
205	66221	G	04S	67E	8	NE NW	12/9/1993	33	30	5	8			
205	66222	G	04S	67E	8	NE NW	12/10/1993	33	30	4.5	8			
205	66223	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	66224	G	04S	67E	8	NW SW	1/10/1996	8			7			
205	66225	G	04S	67E	8	NW SW	12/16/1995	8			7			
203	65438	X	04S	67E	5	SW SW	10/24/1979	82	82	8	13	130	100	
203	65439	X	04S	67E	5		7/25/1978	118	118	8	8		60	
228	70115	G	10S	47E	27	NW SE	8/20/1997	200	200	2.5	33.5			

NDWR Wells (No Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Township	Range	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.
205	70194	G	04S	67E	8	NW SW	3/21/1996	20	20	10	6.11			
205	70195	G	04S	67E	8	NW SW	3/21/1996	20	20	10	6.11			
205	70196	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70197	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70198	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70199	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70215	G	04S	67E	8	SW	1/10/1996	8	7		7			
205	70216	G	04S	67E	8	SW	1/10/1996	8			7			
205	70217	G	04S	67E	8	SW	1/10/1996	8			7			
205	70218	G	04S	67E	8	SW	1/10/1996	8			7			
205	70219	G	04S	67E	8	SW	1/10/1996	8			7			
205	70220	G	04S	67E	8	SW	1/10/1996	8			7			
205	70315	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70316	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70317	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70318	G	04S	67E	8	NW SW	3/21/1996	10	10	2	5.9			
205	70319	G	04S	67E	8	NW SW	1/10/1996	8			7			
205	70320	G	04S	67E	8	NW SW	1/10/1996	8			7			
205	70321	G	04S	67E	8	NW SW	1/10/1996	8			7			
205	70322	G	04S	67E	8	NW SW	1/10/1996	8			7			
205	70323	G	04S	67E	8	NW SW	1/10/1996	8			7			
205	70324	G	04S	67E	8	NW SW	1/10/1996	8			7			
229	71721	G	12S	48E	10	NE NE	2/14/1998	1489	1485	2	846			
205	76820	G	04S	67E	8	NE NW	9/2/1999	20	20	2	6.72			
205	76821	G	04S	67E	8	NE NW	9/2/1999	20	20	2	6.38			
205	76822	G	04S	67E	8	NE NW	9/2/1999	20	20	2	6.31			
205	76823	G	04S	67E	8	NE NW	9/2/1999	20	20	2	4.62			
205	76824	G	04S	67E	8	NE NW	9/2/1999	15	15	2				
205	76851	G	04S	67E	8	NE NW	9/2/1999	20	20	2	6.3			
205	86851	G	04S	67E	8	NE SE	6/4/2002	18	18	2	7			
205	86852	G	04S	67E	8	NE SE	6/4/2002	15	13	6	7			
205	86853	G	04S	67E	8	NE SE	6/4/2002	15	13	6	7			
205	86854	G	04S	67E	8	NE SE	6/4/2002	15	13	6	7			
205	86855	G	04S	67E	8	NE SE	6/4/2002	15	13	6	7.5			
205	86856	G	04S	67E	8	NE SE	6/5/2002	20	18	4	7			
205	86857	G	04S	67E	8	NE SE	6/5/2002	20	18	4	7			

NDWR Wells (No Water Rights) Within 1-Mile of CRC

Basin No.	Well Log No.	Proposed Use*	Township	Range	Section	Quarters	Well Completion Date	Depth Drilled (ft-bgs)	Casing Depth (ft-bgs)	Casing Diameter (inches)	Static Water Level (ft-bgs)	Temp. (deg-F.)	Yield (gpm)	Water Right Application No.
205	86858	G	04S	67E	8	NE SE	6/4/2002	20	18	4	6.5			
205	86859	G	04S	67E	8	NE SE	6/5/2002	20	18	4	7			
205	90091	G	04S	67E	8	SE NW	7/24/2003	27	27	6	10			
205	90092	G	04S	67E	8	SE NW	7/29/2003	27	27	6	10			
205	90093	G	04S	67E	8	SE NW	7/29/2003	25	25	6	10			
205	92531	G	04S	67E	8	NE SE	7/28/2003	25						
205	92532	G	04S	67E	8	NE SE	7/28/2003	25						

*** Notes**

Proposed Use Codes:

A	Air conditioning (AC)	J	Industrial-Cooling (IND)	U	Unused (UNU)
B	Bottling (BOT)	K	Mining (MM)	X	Test Well (TST)
C	Commercial (COM)	M	Medicinal (MED)	Y	Deslination (DES)
D	Dewater (DWR)	N	Industrial (IND)	Z	Other (OTH)
E	Power (PWR)	P	Public Supply-Municipal (MUN)		
F	Fire (FIR)	Q	Aquaculture (AQC)		
G	Monitoring Well (MON)	R	Recreation (REC)		
H	Domestic (DOM)	S	Stock (STK)		
I	Irrigation (IRR)	T	Institution (INS)		

USGS-NWIS Wells Within 1-Mile of CRC

Basin No.	Project ID	Site_Name	Latitude	Longitude	Altitude	Altitude Accuracy (ft)	Date of Construc-tion	Well Depth (ft bgs)	Hole Depth (ft bgs)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
227A	U-108	227A S14 E49 10DB 1 NC-EWDP-18P	36.75	-116.44	3164.86	5	20010920	885	890	0	11/9/2001	8/18/2003	22	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364505116264701
227A	U-141	227A S13 E49 34 1 UE-25 WT 12	36.78	-116.43	3525.9	0.1	19830816	1264	1308	8	9/1/1983	6/17/1999	164	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364656116261601
227A	U-144	227A S13 E49 25 2 UE-25 WT 3	36.79	-116.41	3379.3	0.1	19830525	1125	1142	1	6/7/1983	6/23/1999	98	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364757116245801
227A	U-147	227A S13 E49 22 1 UE-25 WT 17	36.8	-116.44	3687.7	0.1	19831030	1376	1453	1	10/31/1983	6/23/1999	155	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364822116262601
227A	U-160	227A S13 E49 14A 1 UE-25p 1 (Entire Well)	36.82	-116.42	3655.5	0.1	19821113	5923	5923	0	11/7/1983	11/7/1983	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364938116252101
227A	U-161	227A S13 E49 14A 2 UE-25p 1 PTH (Lwr Intrvl)	36.82	-116.42	3655.5	0.1	19821113	5923	5923	0	10/21/1983	9/15/2004	214	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364938116252102
227A	U-168	227A S13 E49 14 4 UE-25c 2 HTH	36.82	-116.42	3714.6	0.1	19840109	3000	3000	0	3/18/1984	3/18/1984	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364945116254301
227A	U-169	227A S13 E49 14 1 UE-25c 1 HTH	36.82	-116.42	3709.3	0.1		2961	3000	4	11/7/1983	6/16/1999	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254300
227A	U-170	227A S13 E49 14 2 UE-25c 2 HTH	36.82	-116.42	3714.6	0.1	19840109	3000	3000	3	3/18/1984	10/24/1985	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254301
227A	U-171	227A S13 E49 14 3 UE-25c 3 HTH	36.82	-116.42	3714.9	0.1	19840320	3000	3000	2	5/2/1984	5/2/1984	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254302
227A	U-172	227A S13 E49 14 7 UE-25c 2	36.82	-116.42	3714.5	0.01	19840109	3000	3000	3	9/13/1989	2/5/1998	13	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254401
227A	U-173	227A S13 E49 14 8 UE-25c 3	36.82	-116.42	3715.26	0.01	19840320	3000	3000	13	8/29/1989	6/28/1998	11	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254501
227A	U-174	227A S13 E49 14 5 UE-25c 3	36.82	-116.42	3715	10	19840320	3000	3000	0	8/29/1989	9/10/1990	6	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254502
227A	U-175	227A S13 E49 14 6 UE-25c 3	36.82	-116.42	3715	10	19840320	3000	3000	0	2/22/1990	12/3/1990	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364947116254503
227A	U-241	227A S13 E49 25 1 UE-25 WT 3	36.79	-116.41	3379.3	0.1	19830525	1142	1142	0	10/31/1983	10/31/1983	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365757116245801
227A	U-1611	227A S14 E49 26 1 UE-25p 1 PTH	36.82	-116.42	3668	10				1			0	
173B	U-597	173B N04 E55 19D 1	38.15	-116.15	5000	100		223		0	5/16/1984	5/16/1984	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380920116090501
173B	U-1410	173B N03 E52 02DADB1 USGS-MX	38.15	-116.08	5005	5	19800731	452	470	0	8/25/1980	7/16/1991	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380906116050501
173B	U-1411	173B N03 E52 02DA 2 USGS MX (S. R&R Valley)	38.15	-116.08	5010	10	19800815	495	495	0	8/15/1980	9/14/2004	51	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380906116050502
173A	U-551	173A S01 E51H19DB 1 Willow Witch Well	37.84	-116.2	5930	10		370		0	10/1/1959	11/13/1999	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375017115572201
173A	U-1380	173A N02 E53 35AA 1 USGS MX	37.99	-115.97	4990	100		200	200	0	9/1/1980	1/1/1981	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375951115582201
173A	U-1387	173A N02 E53 09BC 1 USGS MX	38.05	-116.02	4856	80		200		0	9/1/1980	9/4/1991	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380313116012601
173A	U-1402	173A N03 E53 18BC 1 USGS MX	38.12	-116.06	4990	10		200	200	0	3/1/1981	3/15/1990	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380740116034101
229	U-140	229 S13 E49 33 1 USW WT-11	36.78	-116.46	3589.6	0.1	19830809	1365	1446	0	9/1/1983	7/28/1998	96	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=364649116280201
229	U-225	229 S12 E48 04DB 1 Daisy PW-2	36.92	-116.61	3920	20	19961121	2100	2112	0	4/20/1997	4/20/1997	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365515116364601
229	U-226	229 S12 E48 04DBB 1 Crater Flat 1	36.92	-116.61	3930.9	0.1	19890901	1600	1600	3	9/1/1989	9/24/2004	70	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365520116370301
228	U-248	228 S11 E47 10ACAB1 ER-OV-03a	36.99	-116.7	3844.36	1	19970821	251	251	0	10/27/1997	9/21/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365956116421601
228	U-249	228 S11 E47 10ACAB2 ER-OV-03a2	36.99	-116.7	3843.78	1	19970823	642	821	0	10/27/1997	9/21/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365956116421602
228	U-250	228 S11 E47 10ACAB3 ER-OV-03a3	36.99	-116.7	3843.78	1	19970823	133	821	0	10/27/1997	9/21/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=365956116421603

USGS-NWIS Wells Within 1-Mile of CRC

Basin No.	Project ID	Site_Name	Latitude	Longitude	Altitude	Altitude Accuracy (ft)	Date of Construc-tion	Well Depth (ft-bgs)	Hole Depth (ft-bgs)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
228	U-261	228 S10 E47 27DBCD1 ER-OV-02	37.03	-116.7	3880.33	1	19970819	200	200	0	10/27/1997	9/21/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370210116421501
228	U-263	228 S10 E47 27BAA 1 OVU-Lower ET Well	37.04	-116.7	3861	10	19980721	10.9	11.1	0	8/3/1998	6/26/2001	31	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370242116422901
228	U-266	228 S10 E47 22CCD 1 OVU-Middle ET Well	37.04	-116.71	3856	10	19981216	11.1	11.2	0	1/7/1999	6/26/2001	26	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370249116424101
228	U-274	228 S10 E47 22DBD 1 OVU-Dune Well	37.05	-116.7	3883	10	19980330	16.9	17	0	4/13/1998	6/26/2001	37	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370301116421101
228	U-280	228 S10 E47 11ADAD1 ER-OV-01	37.08	-116.68	4072.85	1	19970803	180	180	0	10/27/1997	10/6/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116404901
228	U-281	228 S10 E47 11ADAD2 ER-OV-06a	37.08	-116.68	4073.04	1	19970804	536	536	0	10/27/1997	10/6/2004	41	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116404902
228	U-282	228 S10 E47 11ADAD3 ER-OV-06a2	37.08	-116.68	4072.57	1	19970810	65	71	1	10/27/1997	10/6/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370504116404903
208	U-1333	208 N03 E62 35B 2 USBLM	38.07	-114.99	6000	1	19630508			0	5/8/1963	5/8/1963	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373924115003101
208	U-1390	208 N03 E62 35B 1 USBLM	38.08	-114.99	4870			270		0	5/8/1963	9/21/1994	17	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380450114594201
205	U-1498	205 S04 E67 08B 1 Caliente Public Utilities	37.61	-114.52	4390	1	19521101	185		0	11/1/1952	11/1/1952	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373656114300501
204	U-1493	204 S04 E68 08C 1 Caliente Public Utilities	37.61	-114.4	4658	20	19521129	185	185	0	11/29/1952	11/29/1952	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373639114241201
204	U-1495	204 S04 E67 08CBBB1 City of Caliente Well 8	37.61	-114.51	4390	20	19660223	195	195	1	3/5/1966	3/5/1966	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373649114305701
204	U-1496	204 S04 E67 07DAAA1 City of Caliente Well 10	37.61	-114.51	4390	10	19700211	165	165	0	3/18/1970	4/4/1990	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373649114310201
204	U-1497	204 S04 E67 07DAAA2 City of Caliente Well 9	37.61	-114.51	4390	20	19700211	160	165	1	3/18/1970	3/18/1970	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373650114310001
204	U-1499	204 S04 E67 09BDBD1	37.61	-114.49	4421	2	19700904	52	52	0	9/14/1970	3/14/1985	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373659114293201
204	U-1501	204 S04 E67 09BC 1	37.61	-114.49	4420	10	19700904	52	52	0	9/14/1970	4/3/1990	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373704114294601
204	U-1503	204 S04 E67 05C 1 Caliente Public Utilities	37.62	-114.52	4410	1	19450101	130		0	4/1/1946	4/1/1946	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373727114300201
204	U-1910	204 S04 E67 08 2	37.61	-114.51	4397					1			0	
204	u-2078	204 S04 E67 08ACBC1 City of Caliente Well 1	37.61	-114.5	4410	20				1			0	
204	u-2079	204 S04 E67 08ACBA1 City of Caliente Well 2	37.61	-114.5	4410	20				1			0	
203	U-1505	203 S03 E67 28C 1	37.65	-114.5	4460	1		118		0	6/17/1965	10/14/2002	70	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373919114290401
203	U-1506	203 S03 E67 22B 1	37.67	-114.48	4600	1		175		0	3/16/1963	10/14/2002	59	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374034114274601
203	U-1507	203 S03 E67 14ACAB1	37.68	-114.45	4680	10	19980917	158	158	1	9/18/1998	9/18/1998	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374124114270001
203	U-1509	203 S03 E67 11A 1	37.7	-114.46	4600	1		204		0	4/1/1963	9/30/1975	18	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374215114262401
203	U-1513	203 S03 E67 02D 1	37.71	-114.46	4615	1		158		0	4/1/1958	10/14/2002	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374243114261401
203	U-1514	203 S03 E67 02A 1	37.72	-114.45	4605	1	19400101	225		0	2/24/1962	3/20/1997	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374317114265801
203	U-1517	203 S02 E67 25C 1	37.74	-114.45	4650	1		135		0	2/1/1961	2/1/1961	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374416114253301
203	U-1518	203 S02 E67 25DABB1	37.74	-114.42	4659					1	7/20/1966	10/14/2002	64	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374441114252801
203	U-1519	203 S02 E67 24D 1	37.75	-114.44	4700	1				0	11/16/1967	10/14/2002	59	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374509114250901

USGS-NWIS Wells Within 1-Mile of CRC

Basin No.	Project ID	Site_Name	Latitude	Longitude	Altitude	Altitude Accuracy (ft)	Date of Construc-tion	Well Depth (ft-bgs)	Hole Depth (ft-bgs)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
172	U-1368	172 S01 E57 02BB 1	37.89	-115.54	5546	5	19440221	500	500	0	2/21/1944	3/20/1990	4	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375348115324301
172	U-1383	172 N02 E57 22BBC 1 USGS MX (Garden Valley)	38.02	-115.56	5550	10		1010	1065	0	12/12/1980	9/16/2004	40	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380132115333501
172	U-1384	172 N02 E57 22BA 2 USGS-MX	38.02	-115.56	5400	100	19800816	1032	1099	0	12/12/1980	3/31/1994	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380132115333502
172	U-1385	172 N02 E57 22BBC 3 USGS MX	38.02	-115.56	5550	10		300	1099	0	3/20/1990	3/20/1990	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380132115333503
172	U-1389	172 N02 E58 03AA 1 USGS-MX	38.07	-115.43	5200	20		200	200	0	10/1/1980	3/23/1994	13	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380348115265001
171	U-1359	171 S02 E58 11A 2 USBLM	37.78	-115.42	5700	100		188		0	5/8/1963	3/11/1985	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374716115253801
171	U-1373	171 N01 E58 24 1 Baseline Canyon Federal 2	37.92	-115.35	4932	20	19951101	1560	1880	0	10/31/1996	9/16/2004	20	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375547115244201
171	U-1386	171 S02 E58 11A 1 USBLM	37.79	-115.42	5200	1		188		0	5/8/1963	5/8/1963	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380301115252901
171	U-1395	171 N03 E59 27AD 2 USGS-MX	38.09	-115.33	5010	20	19930827	0	334	0	8/29/1993	9/21/1994	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380536115195102
171	U-1405	171 N03 E59 12AA 1 USGS-MX	38.13	-115.29	5080	100		200	200	0	11/1/1980	11/1/1980	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380823115173901
171	U-1406	171 N03 E59 12AA 2 USGS-MX	38.13	-115.29	5087	20	19930826	354	354	0	8/27/1993	9/21/1994	5	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380823115173902
170	U-1375	170 S01 E56 18DD 1 USGS-MX	37.94	-115.71	4900	100		200	200	0	12/1/1980	12/1/1980	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375633115425201
156	U-588	156 N03 E50 13CA 1 USGS-MX (Revielle Valley)	38.11	-116.33	5350	10	19810213	682	710	0	2/13/1981	9/14/2004	47	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380652116200901
156	U-589	156 N03 E50 13CA 2 USGS-MX	38.11	-116.33	5350	10	19810207	703	710	0	2/7/1981	3/5/1992	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380652116200902
156	U-590	156 N03 E50 13CA 3 USGS-MX	38.11	-116.33	5350	10	19810207	405	710	0	2/7/1981	3/5/1992	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=380652116200903
156	U-598	156 N04 E51 29D 1	38.17	-116.25	5264	10	19511006	137	137	0	10/6/1951	10/6/1951	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381023116152901
156	U-604	156 N04 E51 16CA 1 USGS-MX	38.2	-116.24	5200	80		200		0	9/1/1980	9/20/1994	10	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=381216116142401
156	U-1718	156 N04 E51 13DA 2	38.2	-116.17						3			0	
156	U-1719	156 N04 E51 13DA 3	38.2	-116.17						2			0	
149	U-568	149 S01 E46 01BA 1 USAF TTR 1A WW	37.88	-116.77	5353	10	19800122	405	405	0	11/27/1990	11/27/1990	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375303116463101
149	U-569	149 S01 E46 02A 1 TTR EH-7	37.88	-116.79	5343	10	19831117	715	715	0	11/20/1983	11/19/1992	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375310116472301
149	U-570	149 S01 E46 02A 2 TTR EH-7 WW	37.88	-116.79	5343	10	19890828	660	660	0	9/1/1989	6/16/2004	28	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375310116472302
149	U-572	149 N01 E46 25CABA1 TTR Sandia 3	37.9	-116.77	5365.9	0.5	19590520	250	250	0	6/10/1959	11/9/1999	15	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375429116463201
149	U-573	149 N01 E47 30 1 TTR Reeds Ranch Well	37.91	-116.75	5384	10		127		0	4/19/1990	6/16/2004	26	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=375453116450501
149	U-1682	149 N01 E47 30ABB 1	37.91	-116.75						2			0	
149	U-1696	149 N01 E47 02BAB 1	37.97	-116.68						2			0	
146	U-291	146 S09 E46 35A 1 BLM Springdale	37.11	-116.79	4035	10		117		0	1/1/1952	9/29/2004	36	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370648116473001
146	U-296	146 S09 E46 28BBCB1 NDOT TPJ-2	37.13	-116.84	4005	5				0	3/11/1985	9/29/2004	33	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370753116502701
146	U-302	146 S09 E46 20BADA1 USBLM TPJ-1	37.14	-116.85	3991	2		107		0	1/1/1952	9/29/2004	43	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370840116510101
146	U-318	146 S09 E46 18 1 USAF - Tolicha Pk Hand Dug	37.15	-116.86	4009			50		0	4/26/1990	2/24/1997	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=370937116514001

USGS-NWIS Wells Within 1-Mile of CRC

Basin No.	Project ID	Site_Name	Latitude	Longitude	Altitude	Altitude Accuracy (ft)	Date of Construc-tion	Well Depth (ft-bgs)	Hole Depth (ft-bgs)	Water Quality Data Count	Ground-water Begin	Ground-water End	Ground-water Data Count	Site Link (Water Level / Water Quality)
146	U-403	146 S08 E44 12CD 1	37.24	-116.99	3985	1		250		0	9/17/1959	2/8/1962	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371450116594901
146	U-415	146 S08 E44 12 2	37.25	-116.99	4000	10	19620117	125	125	0	2/8/1962	3/12/1985	3	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371505116594101
146	U-420	146 S08 E44 12 1	37.25	-116.99	4000	10				0	3/12/1985	3/12/1985	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371517116594001
146	U-456	146 S08 E44 02 2	37.27	-117.01	4008	5	19680306	203	203	0	3/15/1968	3/12/1985	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371646117010101
146	U-495	146 S07 E44 21 1	37.31	-117.05	4105	5		375		0	10/26/1961	3/12/1985	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=371855117030001
144	U-518	144 S04 E43 33AAA 2 Ralston Well	37.55	-117.15	4756	5		409		0	4/20/1990	6/17/2004	29	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373320117090601
144	U-519	144 S05 E43 03 1	37.53	-117.14	4745	20	19760724	102	102	0	7/24/1976	7/24/1976	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373323117090801
144	U-520	144 S04 E43 33A 1 Ralston	37.55	-117.15	4780	1				0	1/18/1967	1/18/1967	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=373338117085001
142	U-527	142 S03 E42 11B 1 City of Goldfield	37.69	-117.23	5800	1		440		0	3/6/1965	1/18/1967	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374209117135101
142	U-528	142 S03 E42 10A 1 City of Goldfield	37.69	-117.24	5900	1		440		0	3/6/1965	1/18/1967	2	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374209117141501
142	U-530	142 S03 E42 02C 1 City of Goldfield	37.7	-117.23	5710	1		45		0	1/18/1967	1/18/1967	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374243117135101
142	U-533	142 S02 E42 26CAA 1	37.73	-117.23	5540	5		0		0	4/2/1984	4/2/1984	1	http://nwis.waterdata.usgs.gov/nv/nwis/gwlevels?site_no=374401117140501

USGS-NWIS Surface Water Sites Within 1-Mile of CRC

Project ID	Basin No.	Site_Name	Latitude	Longitude	Altitude	Altitude Accuracy	Water Quality Begin	Water Quality End	Water Quality Data Count	Daily Flow Data Count	Site Data (Flow / Water Quality)
STR-1799	156	156 N03 E50 13BCC 1 Stream-Reveille V Ertec	38.10	-116.33	5482		3/30/81	4/4/81	2	0	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=380630116201901
SPR-1811	156	156 N04 E51 13DA 1 Spring	38.20	-116.17			5/11/67	8/2/67	4	0	http://nwis.waterdata.usgs.gov/nv/nwis/qwdata?site_no=381215116103500
SPR-2049	181	181 N01 E63 28CC 1 Black Rock Spring	37.91	-114.91	5520	20	3/22/88	3/22/88	1	0	http://nwis.waterdata.usgs.gov/nv/nwis/qwdata?site_no=375443114550501
SPR-2074	204	204 S04 E67 08A 1 Caliente Mineral Hot Spr	37.61	-114.51	4400		2/4/74	2/4/74	1	0	http://nwis.waterdata.usgs.gov/nv/nwis/qwdata?site_no=373647114304201
SPR-2082	204	204 S04 E67 08B 2 Spring	37.62	-114.51	4430		4/10/85	4/10/85	1	0	http://nwis.waterdata.usgs.gov/nv/nwis/qwdata?site_no=373716114303401
SPR-2086	203	203 S02 E67 07CD 1 Spring	37.78	-114.52	5275		4/10/85	4/10/85	2	0	http://nwis.waterdata.usgs.gov/nv/nwis/qwdata?site_no=374703114314101
STR-2146	156	Hot Creek near Warm Springs, NV	38.19	-116.17					0	1928	http://nwis.waterdata.usgs.gov/nv/nwis/discharge?site_no=10247050

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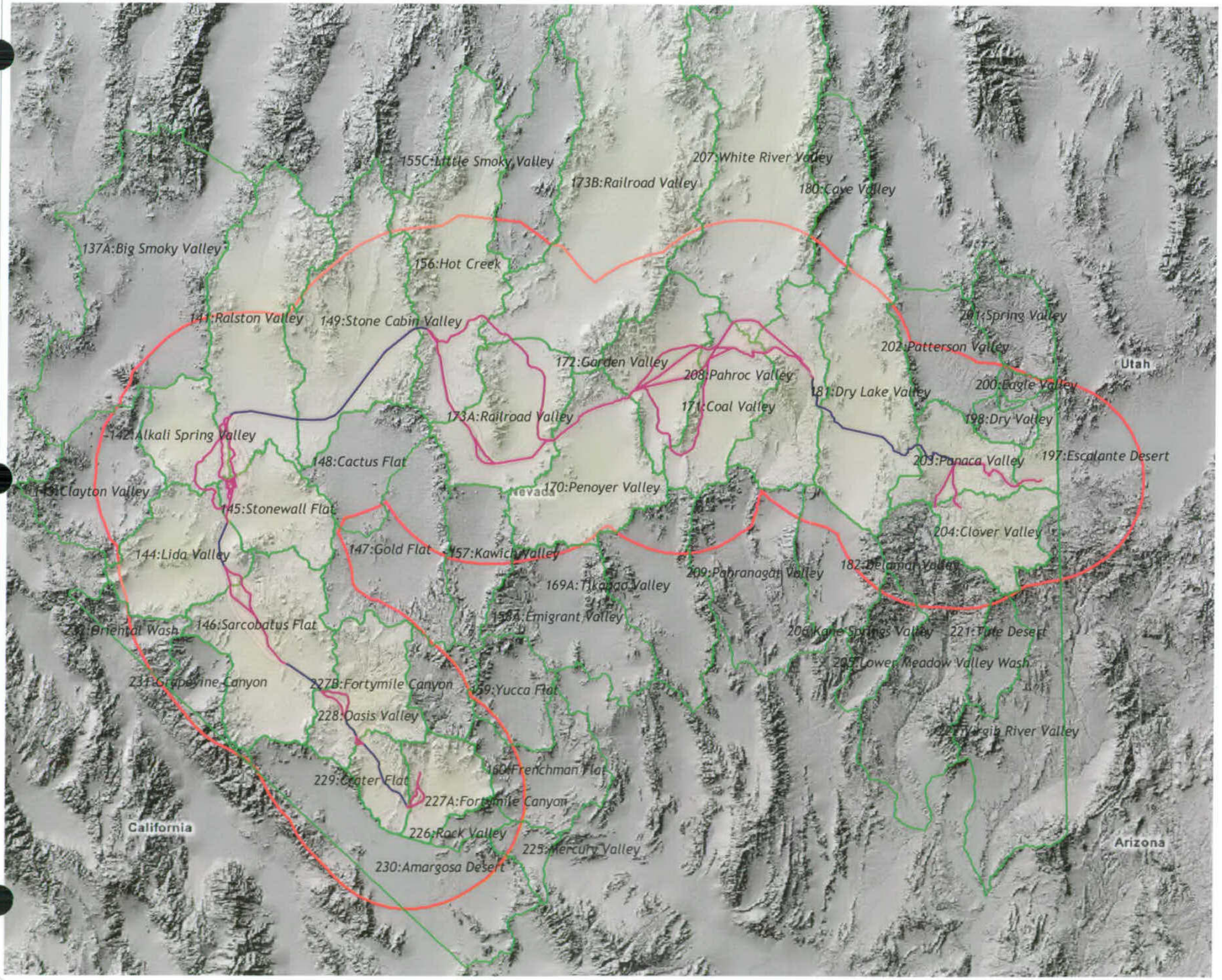

Legend

- Study Corridor Basins
- CRC Basins
- 40-Mile Study Corrodor Boundary
- Alternative Alignments
- Common Segments

0 5 10 20 30 40 50 Miles

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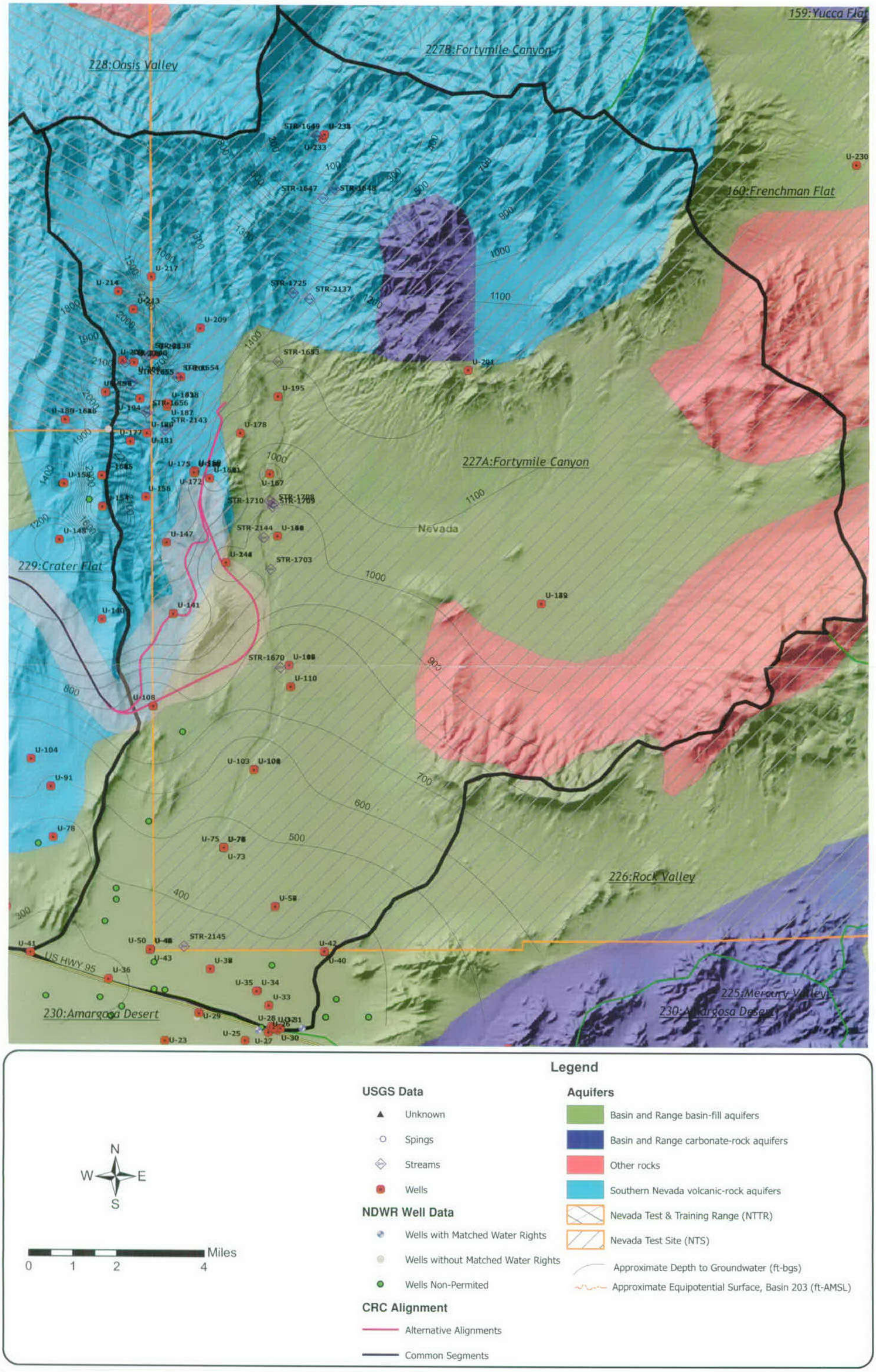

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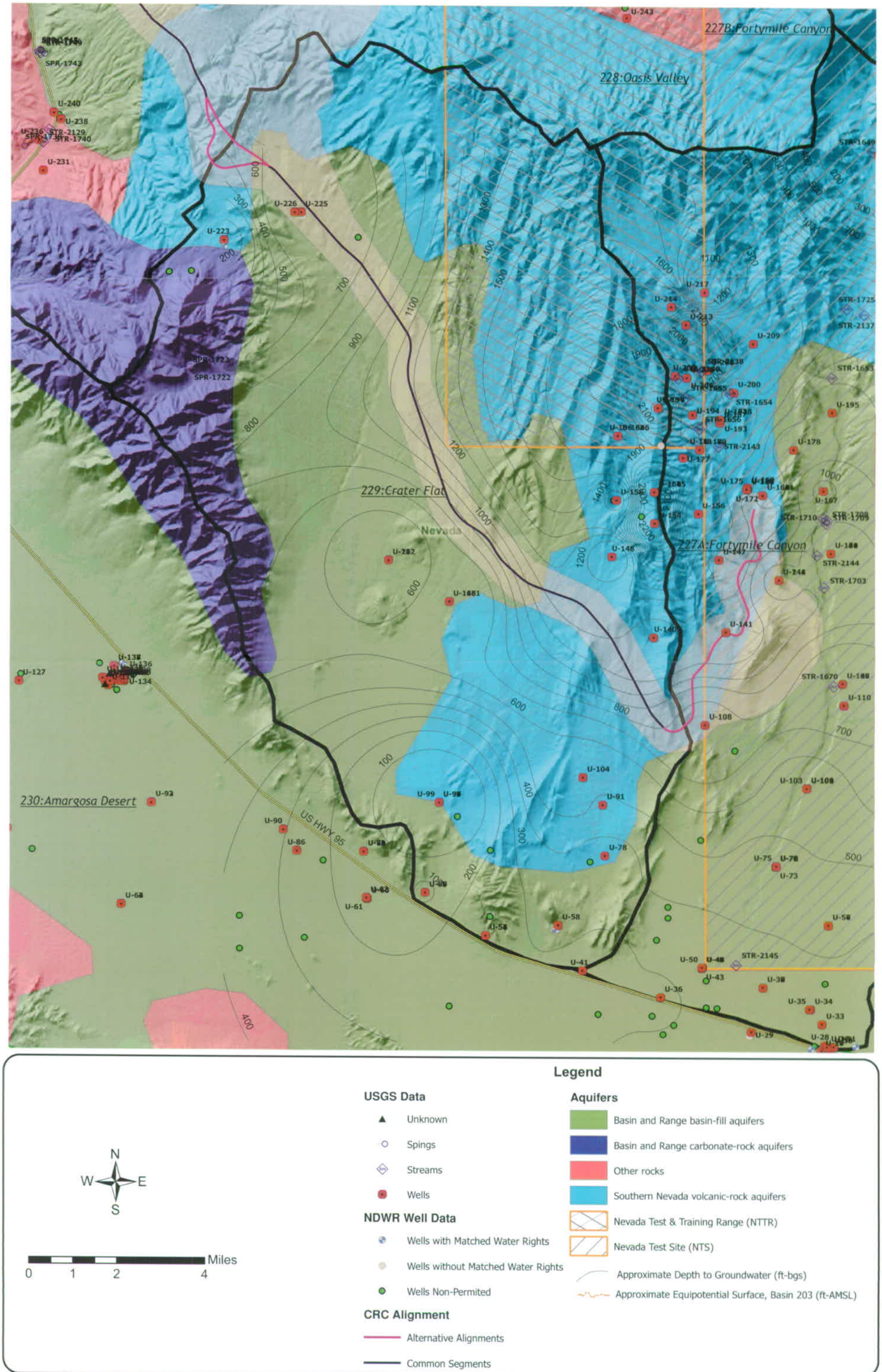

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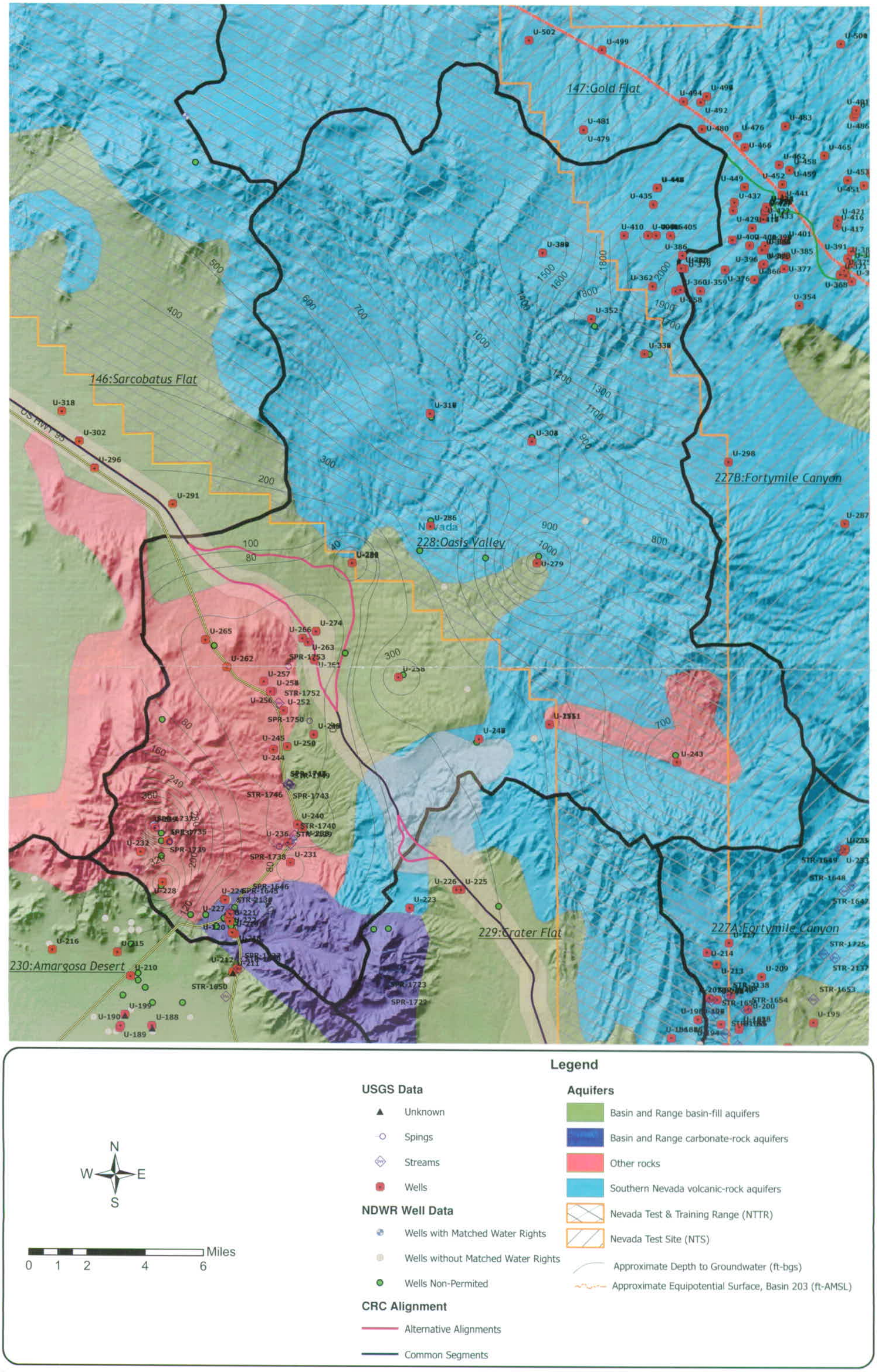

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Legend

N W E S

0 1 2 4 6 8 Miles

USGS Data

- Unknown
- Spings
- Streams
- Wells

NDWR Well Data

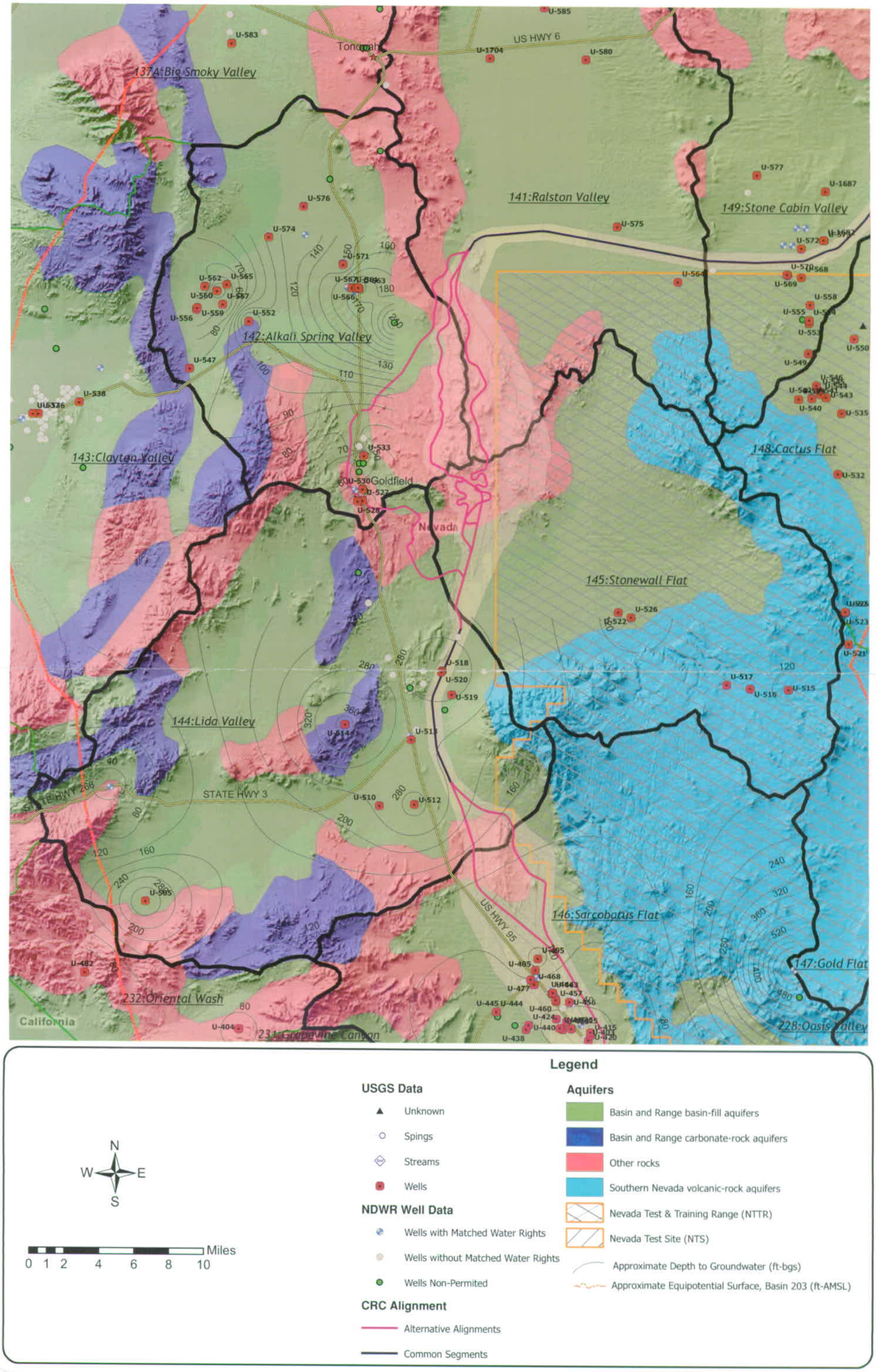
- Wells with Matched Water Rights
- Wells without Matched Water Rights
- Wells Non-Permited

CRC Alignment

- Alternative Alignments
- Common Segments

Aquifers

- Basin and Range basin-fill aquifers
- Basin and Range carbonate-rock aquifers
- Other rocks
- Southern Nevada volcanic-rock aquifers
- Nevada Test & Training Range (NTTR)
- Nevada Test Site (NTS)
- Approximate Depth to Groundwater (ft-bgs)
- Approximate Equipotential Surface, Basin 203 (ft-AMSL)


137A:Big Smoky Valley
141:Ralston Valley
142:Alkali Spring Valley
143:Clayton Valley
144:Lida Valley
145:Stonewall Flat
146:Sarcobatus Flat
147:Gold Flat
148:Cactus Flat
149:Stone Cabin Valley
228:Oasis Valley
231:Grapevine Canyon
232:Oriental Wash
Tonopah
Goldfield
Nevada
California
US HWY 6
US HWY 95
STATE HWY 3
STATE HWY 266
Legend
USGS Data
Unknown
Spings
Streams
Wells
NDWR Well Data
Wells with Matched Water Rights
Wells without Matched Water Rights
Wells Non-Permited
CRC Alignment
Alternative Alignments
Common Segments
Aquifers
Basin and Range basin-fill aquifers
Basin and Range carbonate-rock aquifers
Other rocks
Southern Nevada volcanic-rock aquifers
Nevada Test & Training Range (NTTR)
Nevada Test Site (NTS)
Approximate Depth to Groundwater (ft-bgs)
Approximate Equipotential Surface, Basin 203 (ft-AMSL)
N
W
E
S
0 1 2 4 6 8 10 Miles

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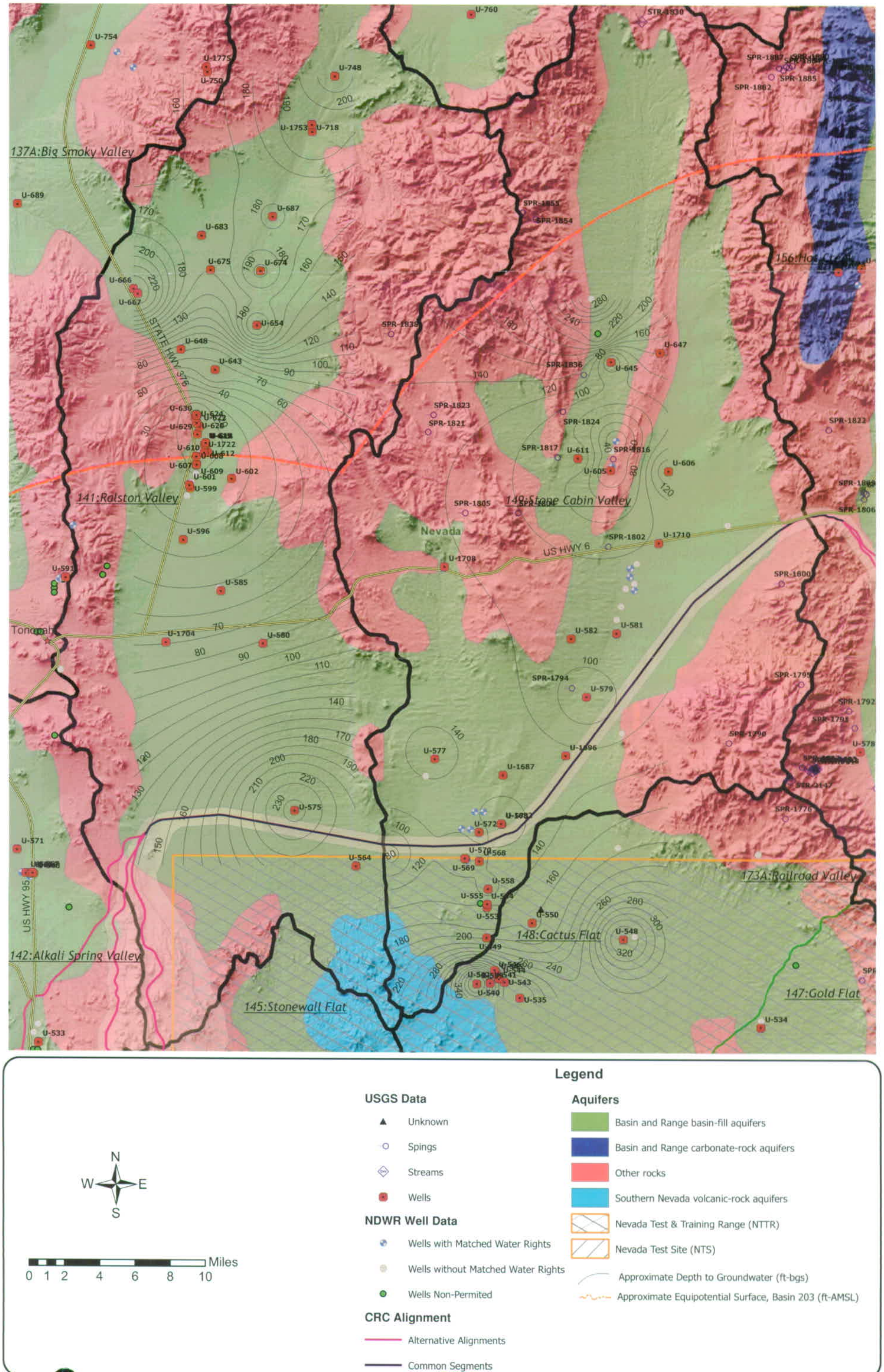

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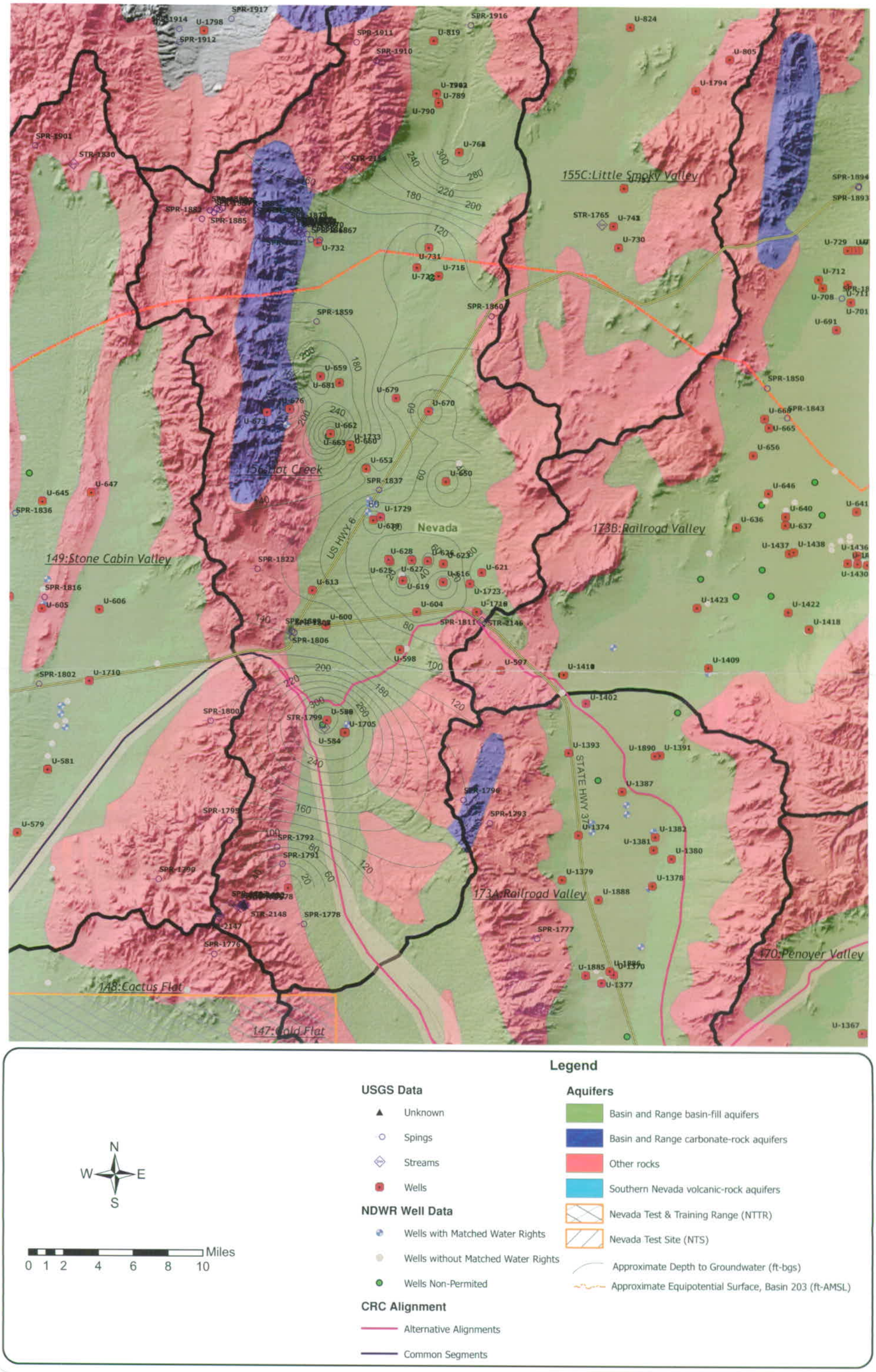

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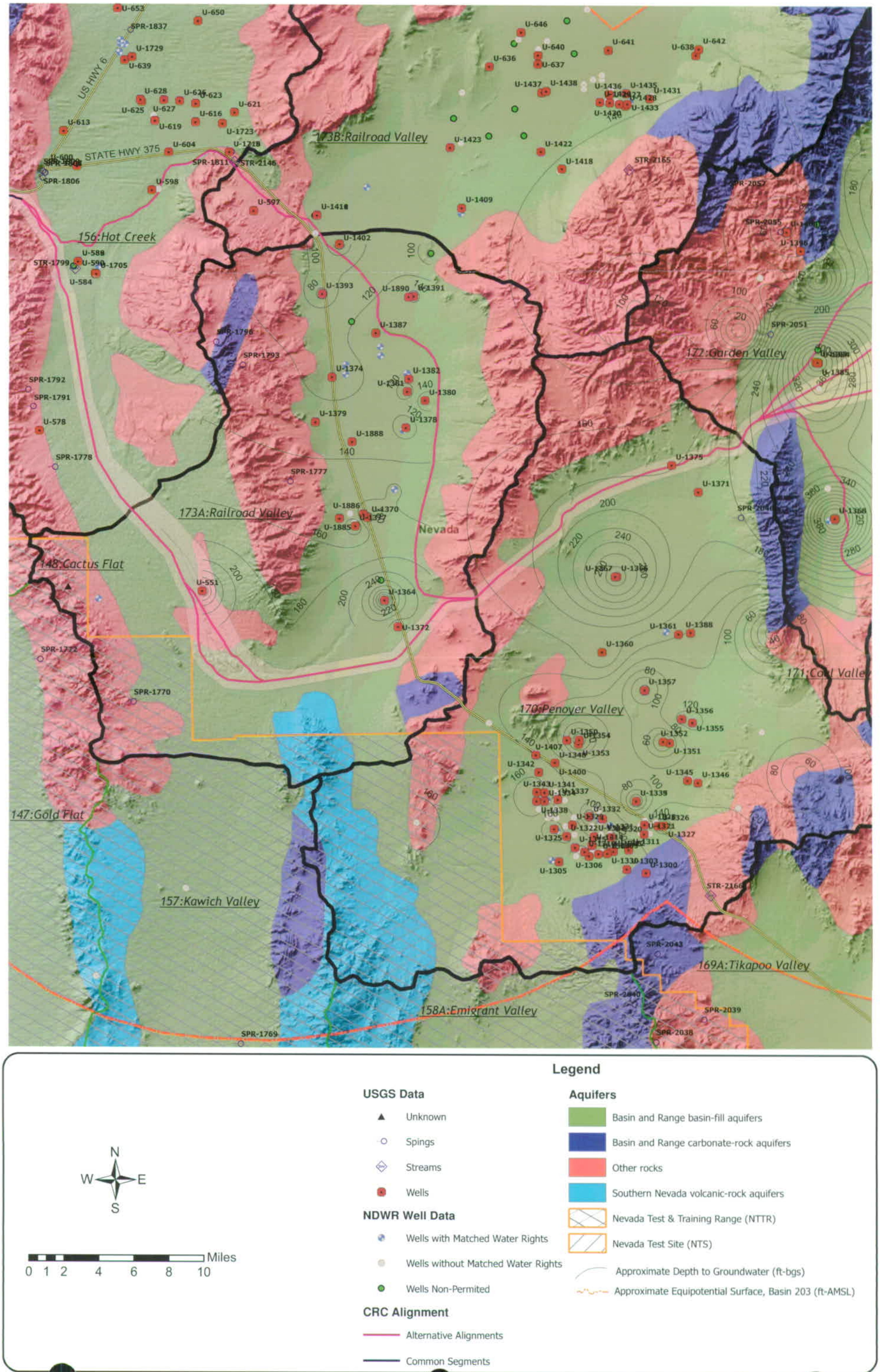

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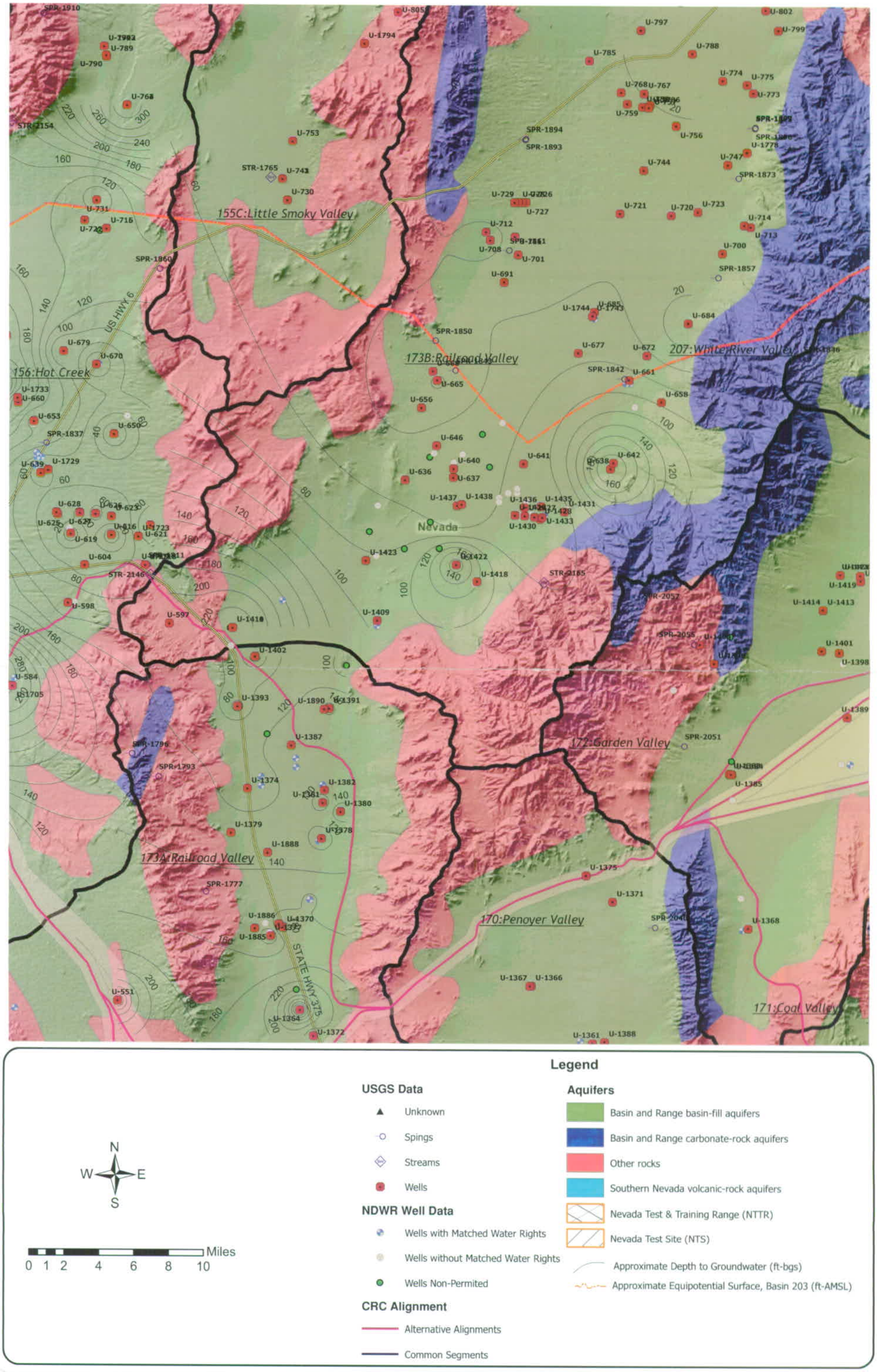

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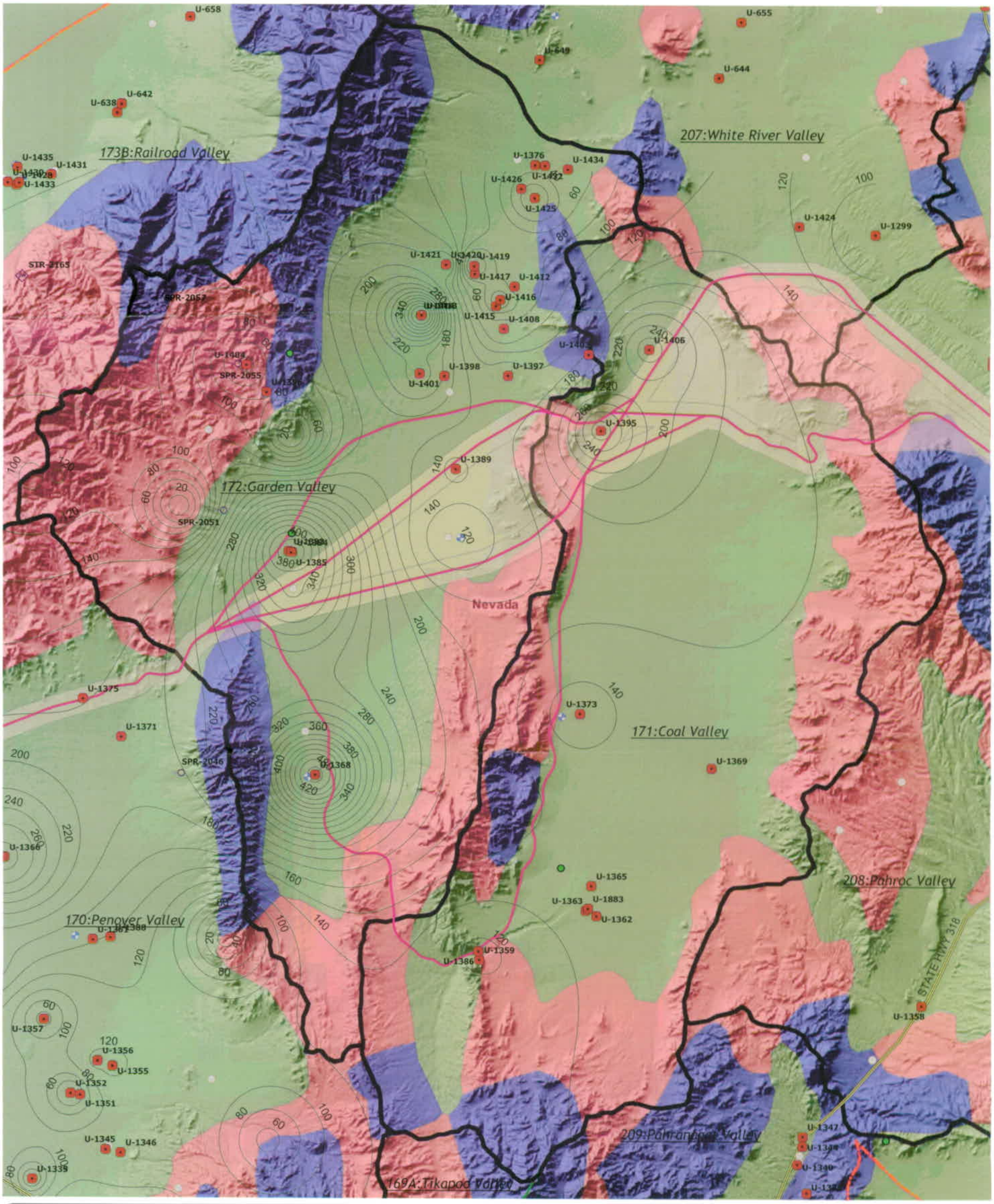

Legend

N W E S

0 1 2 4 6 8 Miles

USGS Data

- Unknown
- Spings
- Streams
- Wells

NDWR Well Data

- Wells with Matched Water Rights
- Wells without Matched Water Rights
- Wells Non-Permited

CRC Alignment

- Alternative Alignments
- Common Segments

Aquifers

- Basin and Range basin-fill aquifers
- Basin and Range carbonate-rock aquifers
- Other rocks
- Southern Nevada volcanic-rock aquifers
- Nevada Test & Training Range (NTTR)
- Nevada Test Site (NTS)
- Approximate Depth to Groundwater (ft-bgs)
- Approximate Equipotential Surface, Basin 203 (ft-AMSL)

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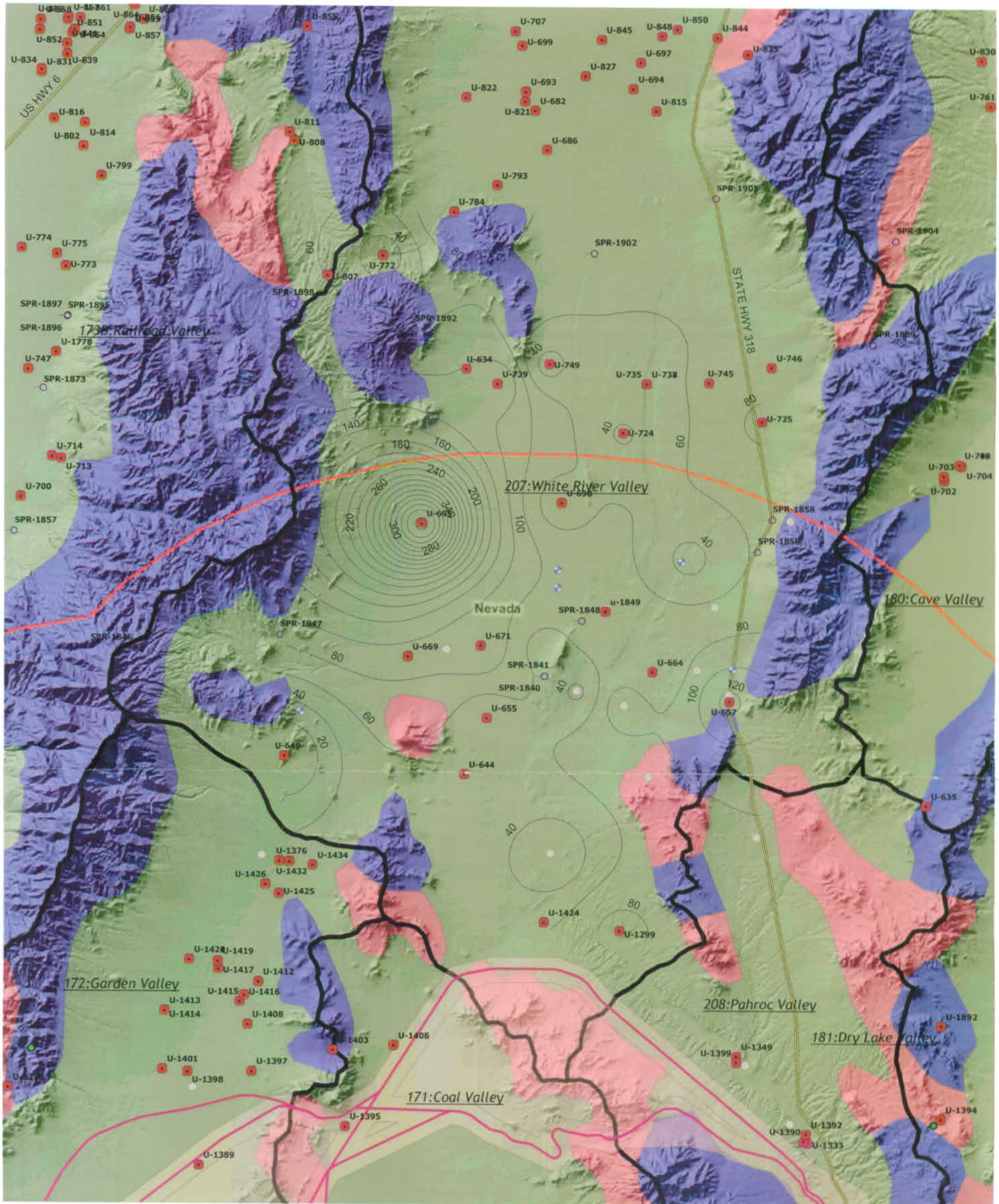

Legend

USGS Data

- Unknown
- Spings
- Streams
- Wells

NDWR Well Data

- Wells with Matched Water Rights
- Wells without Matched Water Rights
- Wells Non-Permited

CRC Alignment

- Alternative Alignments
- Common Segments

Aquifers

- Basin and Range basin-fill aquifers
- Basin and Range carbonate-rock aquifers
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- Southern Nevada volcanic-rock aquifers
- Nevada Test & Training Range (NTTR)
- Nevada Test Site (NTS)
- Approximate Depth to Groundwater (ft-bgs)
- Approximate Equipotential Surface, Basin 203 (ft-AMSL)

N
W E
S

0 1 2 4 6 8 Miles

Converse Consultants

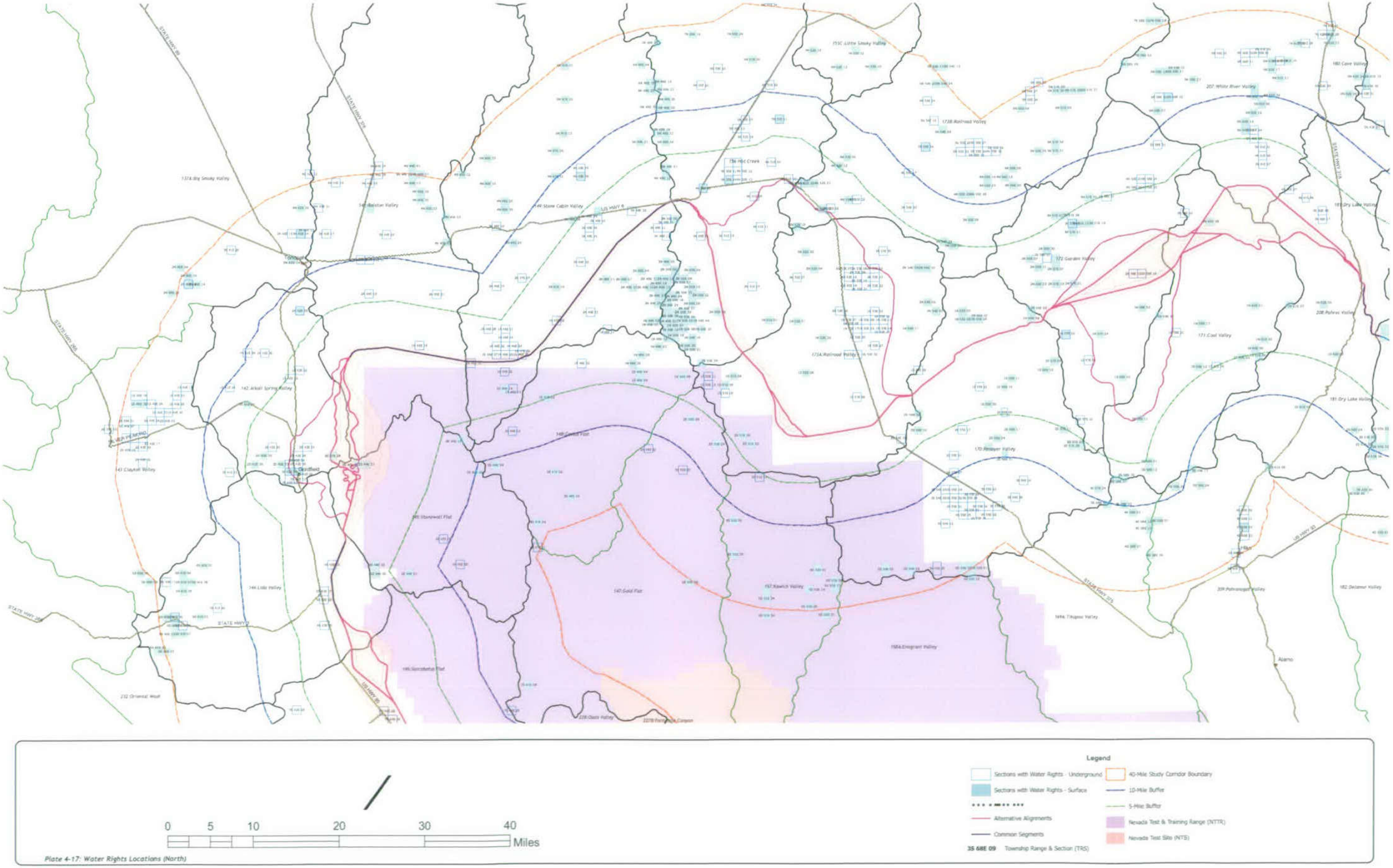

Plate 4-17: Water Rights Locations (North)

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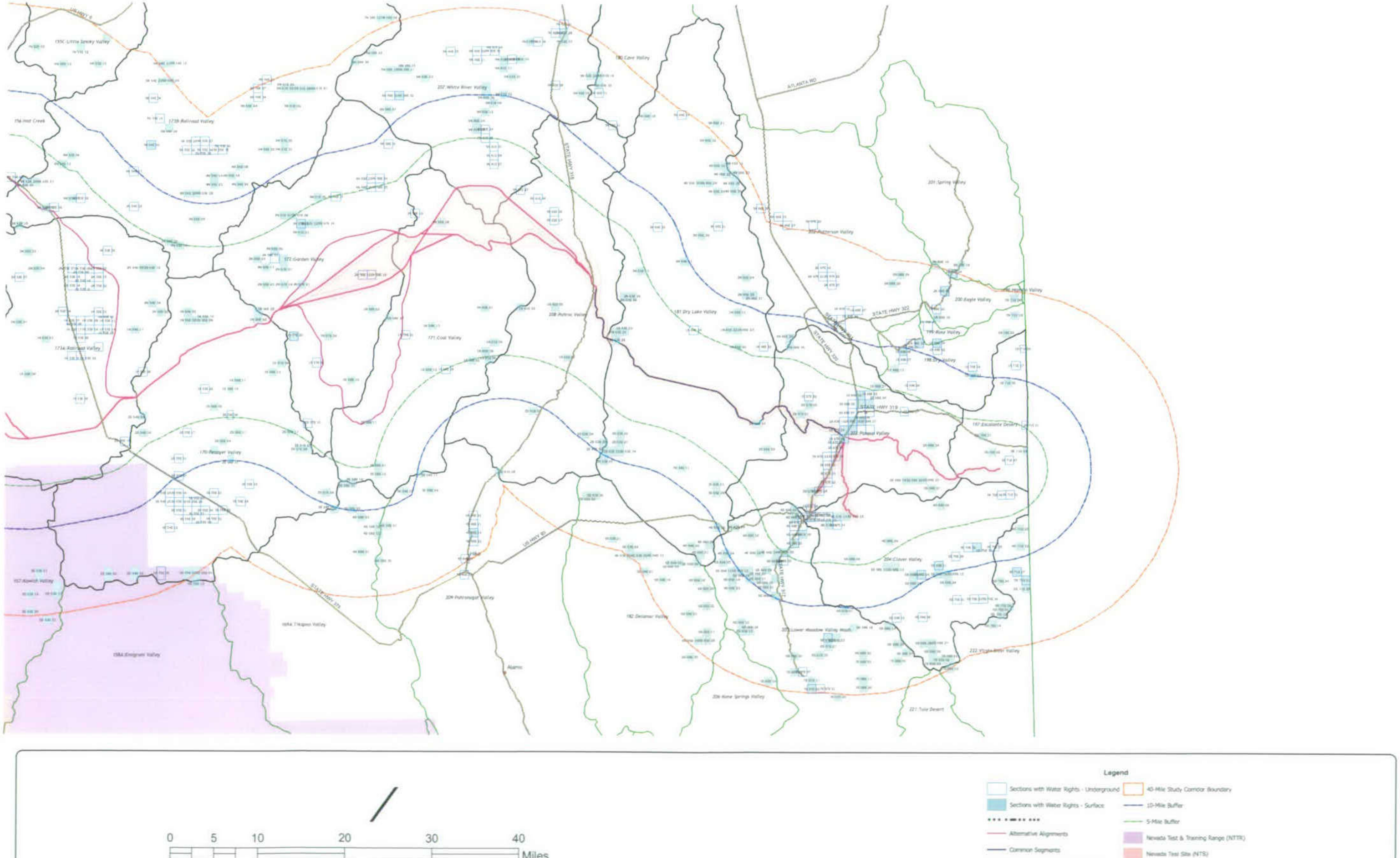

Plate 4-18: Water Rights Locations (East)

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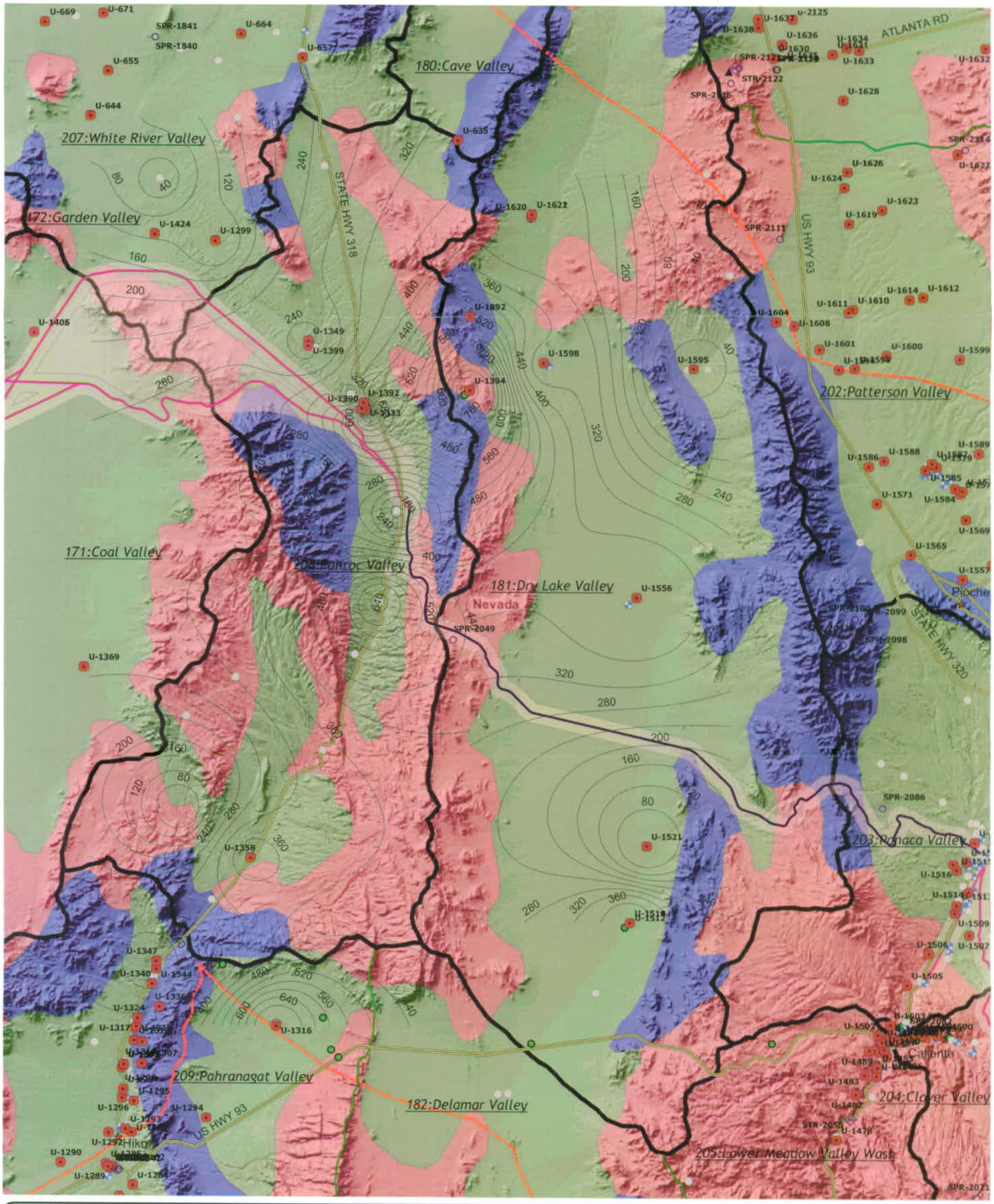

Legend

N W E S

0 1 2 4 6 8 10 Miles

USGS Data

- Unknown
- Spings
- Streams
- Wells

NDWR Well Data

- Wells with Matched Water Rights
- Wells without Matched Water Rights
- Wells Non-Permited

CRC Alignment

- Alternative Alignments
- Common Segments

Aquifers

- Basin and Range basin-fill aquifers
- Basin and Range carbonate-rock aquifers
- Other rocks
- Southern Nevada volcanic-rock aquifers
- Nevada Test & Training Range (NTTR)
- Nevada Test Site (NTS)
- Approximate Depth to Groundwater (ft-bgs)
- Approximate Equipotential Surface, Basin 203 (ft-AMSL)

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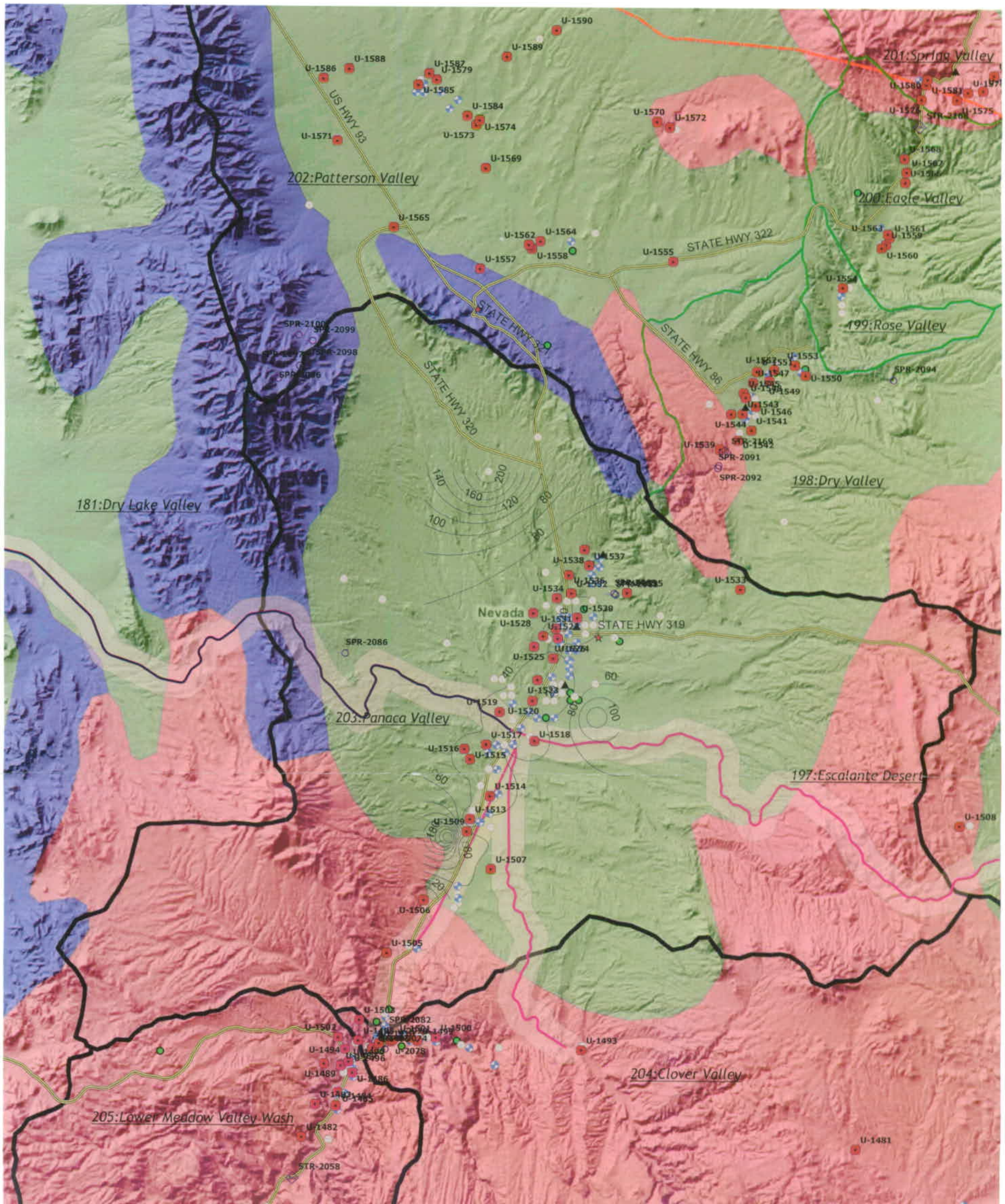

Legend

USGS Data

- Unknown
- Spings
- Streams
- Wells

NDWR Well Data

- Wells with Matched Water Rights
- Wells without Matched Water Rights
- Wells Non-Permited

CRC Alignment

- Alternative Alignments
- Common Segments

Aquifers

- Basin and Range basin-fill aquifers
- Basin and Range carbonate-rock aquifers
- Other rocks
- Southern Nevada volcanic-rock aquifers
- Nevada Test & Training Range (NTTR)
- Nevada Test Site (NTS)
- Approximate Depth to Groundwater (ft-bgs)
- Approximate Equipotential Surface, Basin 203 (ft-AMSL)

N W E S

0 1 2 4 6 Miles

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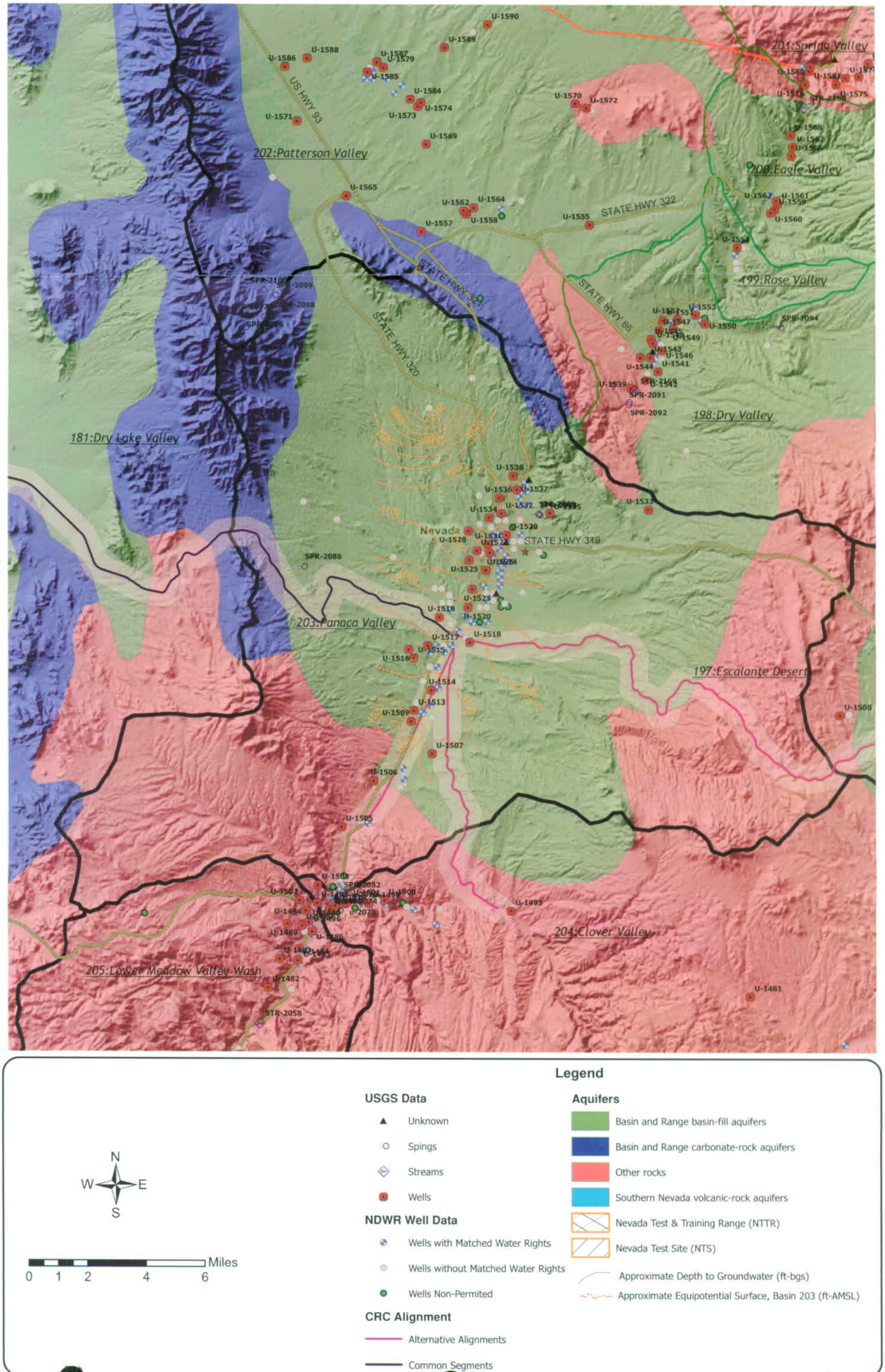

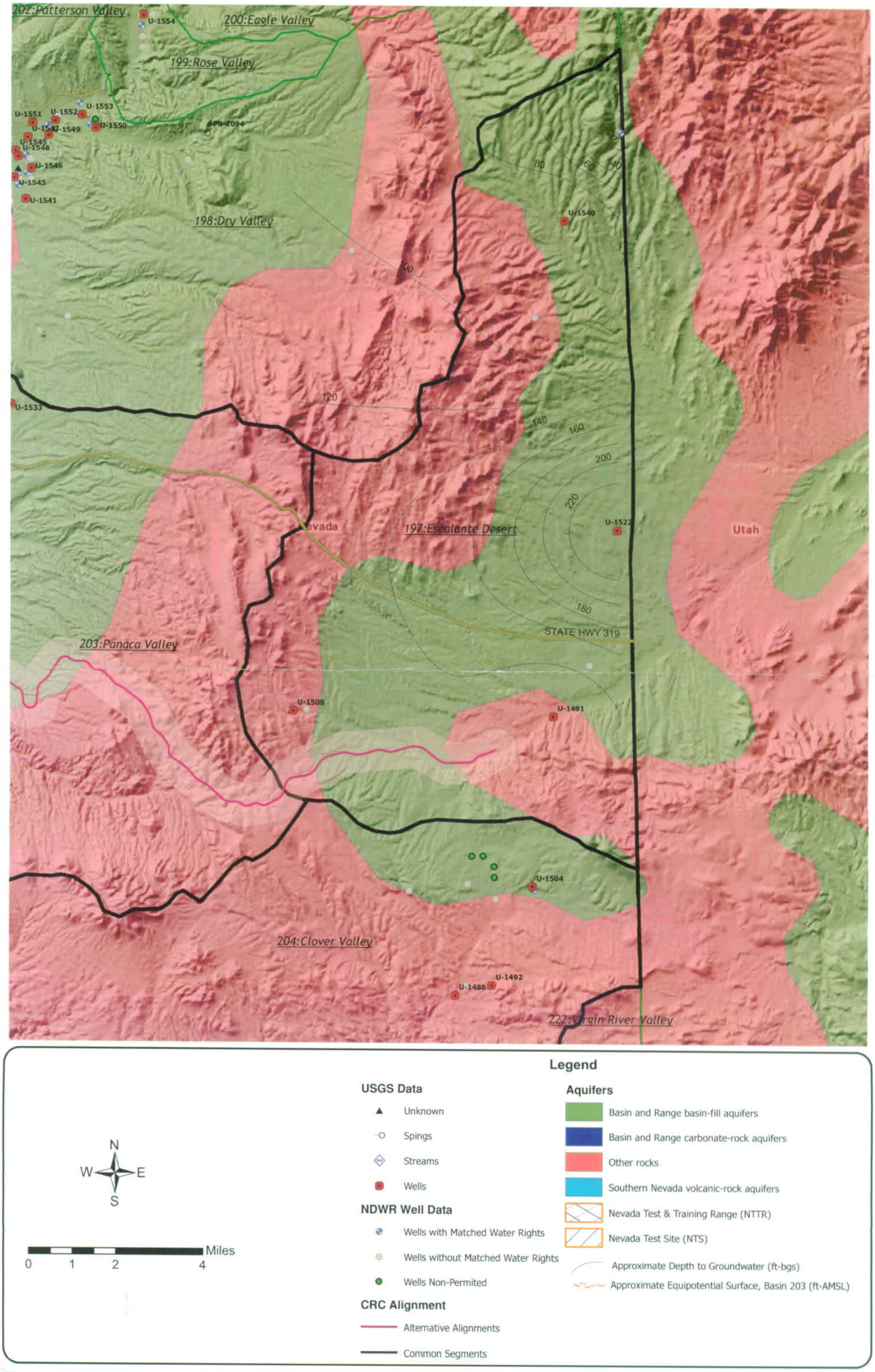
202:Patterson Valley
U-1554
200:Eagle Valley
199:Rose Valley
U-1553
U-1551
U-1552
U-1549
U-1550
SPR-2094
U-1545
U-1548
U-1546
U-1543
U-1541
198:Dry Valley
80
60
40
U-1540
100
120
U-1533
140
160
200
220
U-1522
197:Escalante Desert
Utah
180
STATE HWY 319
203:Panaca Valley
U-1508
U-1491
U-1504
204:Clover Valley
U-1492
U-1488
222:Virgin River Valley
Legend
N
W
E
S
0
1
2
4
Miles
USGS Data
Unknown
Spings
Streams
Wells
NDWR Well Data
Wells with Matched Water Rights
Wells without Matched Water Rights
Wells Non-Permited
CRC Alignment
Alternative Alignments
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Nevada Test Site (NTS)
Approximate Depth to Groundwater (ft-bgs)
Approximate Equipotential Surface, Basin 203 (ft-AMSL)

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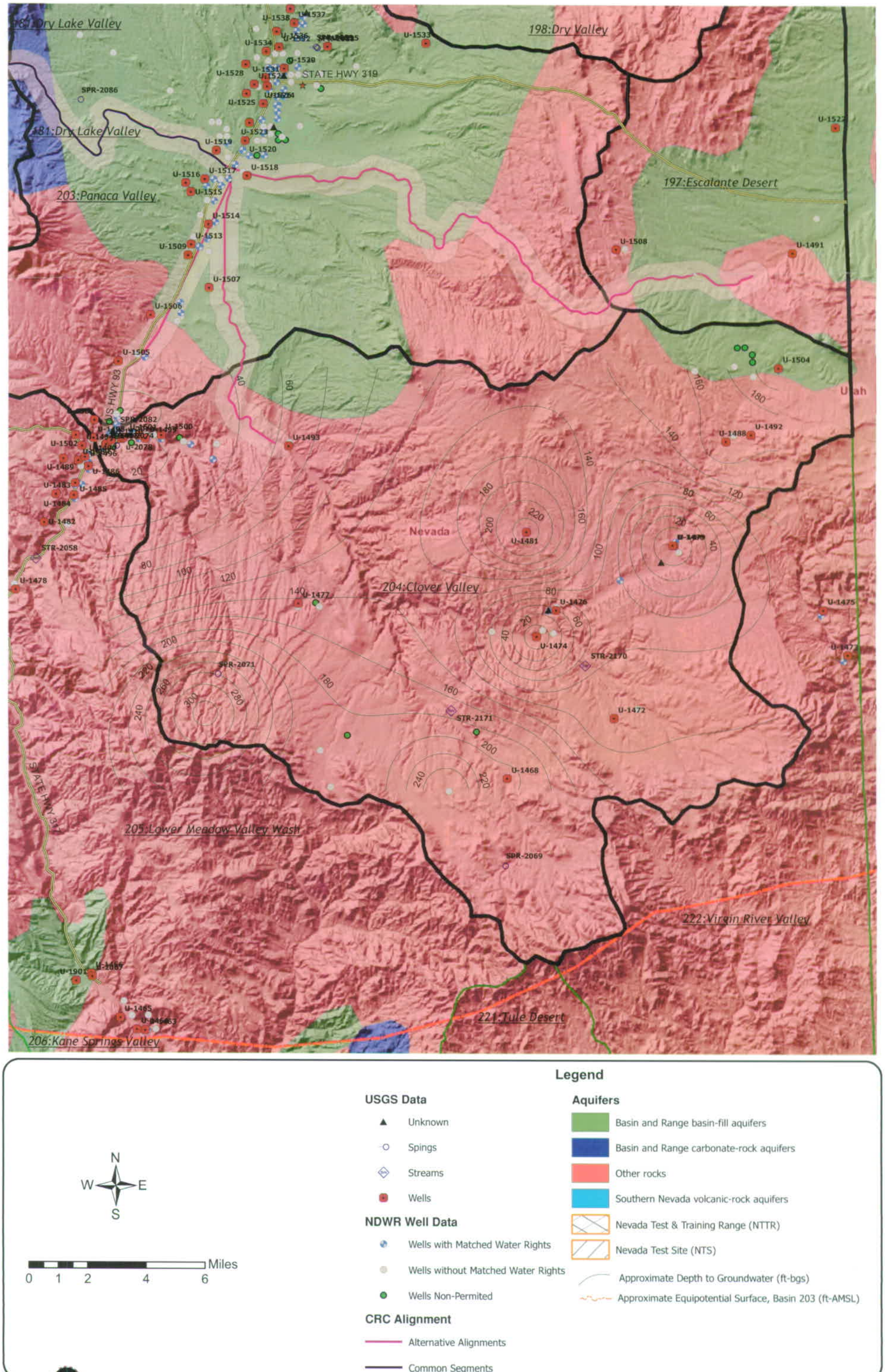

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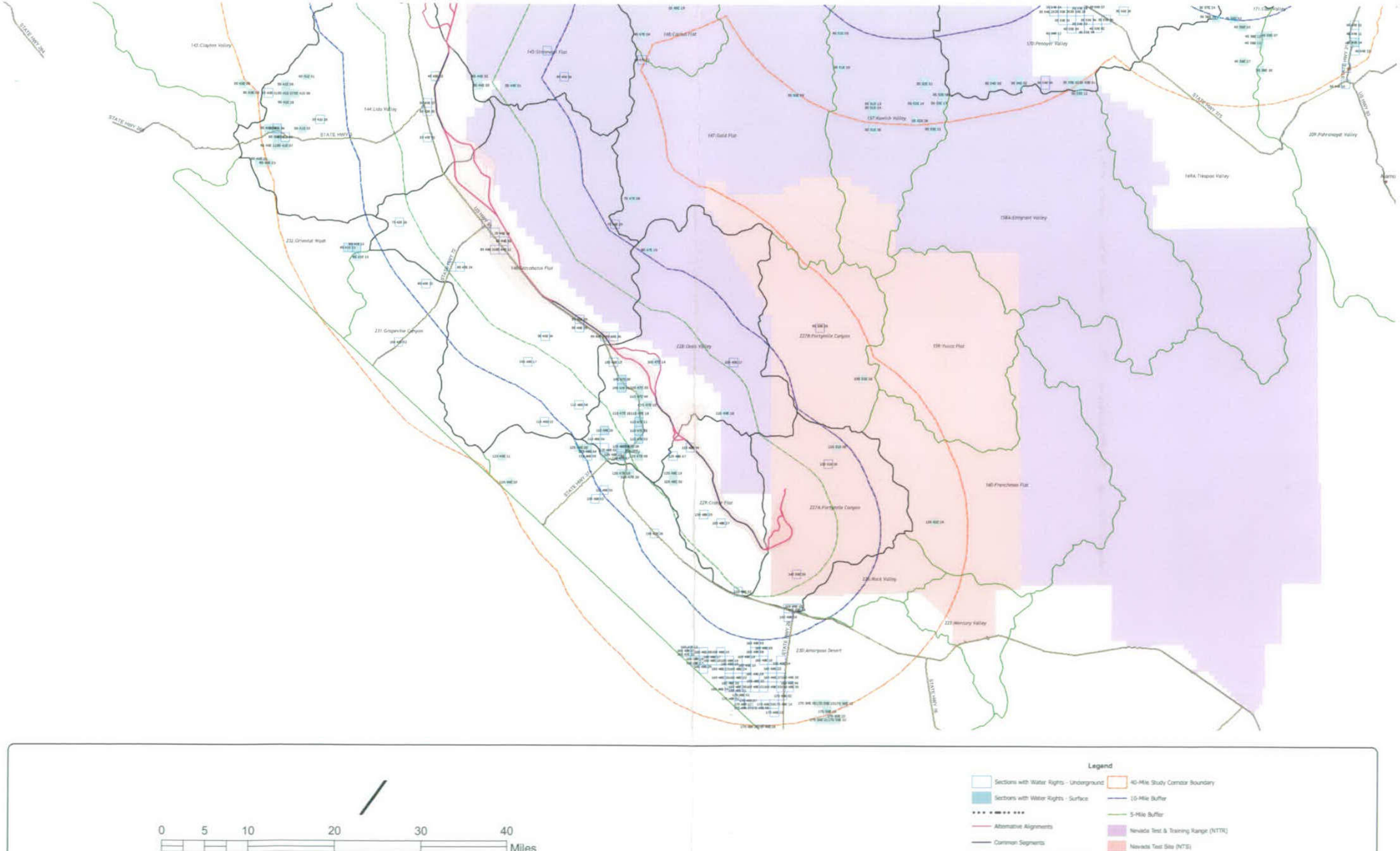

Plate 4-16: Water Rights Locations (West)